

HISTORY
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

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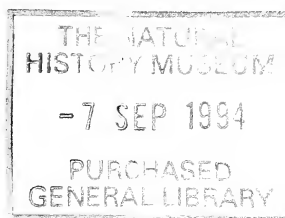
BERWICKSHIRE

NATURALISTS' CLUB

INSTITUTED SEPTEMBER 22, 1831

"MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CÆLUM"

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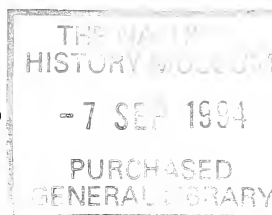
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HISTORY OF THE
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HISTORY
OF THE
BERWICKSHIRE NATURALISTS'
CLUB

OBSERVATIONS OF AN AGRICULTURAL MERCHANT

*being the Anniversary Address delivered by Mr Geoffrey C. McCreath,
President of the Club, on 22nd October 1993.*

One day in the early 1930s my father, a fertiliser manufacturer, took me, a small boy, into the garden at Cheviot House, Castle Terrace, Berwick upon Tweed, and showed me a row of potatoes. "What do you think of these?" he said. "They are grown with our new potato fertiliser." "Very good," I said, "but I would have doubled the application." "No," he said, "you cannot do that."

M. André Voisin, the great French soil scientist, wrote in 1959: "We should frequently meditate on the words of Ash Wednesday: 'Man, remember that you are dust and that you will return to dust'. This is not merely a religious and philosophical doctrine but a great scientific truth which should be engraved above the entrance to every Faculty of Medicine throughout the world. We might then better remember that our cells are made up of mineral elements which are to be found at any given moment in the soil of Normandy, Yorkshire or Australia; and if these 'dusts' have been wrongly assembled in plant, animal or human cells the result will be the imperfect functioning of the latter".¹ So wrote André Voisin in 1959.

What I am doing this afternoon is to tell you what I have observed during my life as an agricultural merchant in the years 1946 to 1984 and how I believe we are upsetting the balance of the soil to the detriment of plant, animal and possibly human life.

What would our founder, Dr George Johnston, have thought and said if he could come back to our Border Country today? I certainly would like to meet him and discuss various common interests with him, for instance fishing, bowling, the Berwick Parish Church, the sea and its products, worms, the soil and its products. He was a man of great wit and charm and I am so

impressed with his life and work that I have prepared copies of his appreciation given on the 30th June 1856 by Robert Embleton, Surgeon and President of the Club for that year.²

In 1824 Dr Johnston became a fellow of the College of Surgeons, and his inaugural dissertation was on the subject of cancer. What a great boost for man if we could reduce the number of people who die from cancer and other diseases. I think we could; but changes are required in the way we live our lives.

I feel very incompetent to be speaking to you today when I think of Dr George Johnston, Robert Embleton and the many other Presidents of this famous Club, both men and women, and including my parents-in-law Dr James McWhir, Mrs Margaret McWhir and my wife Margaret McCreath.

Unfortunately I did not have the opportunity of Dr Johnston to go to University as I had to go off to war instead. On my return from the 1939/1945 war I started with Fisons Limited, artificial fertiliser manufacturers, who had purchased the family firm of H. G. McCreath & Sons during the war. After a period of training I was privileged to travel all over the Borders as a representative of Fisons Limited and later with H. G. McCreath & Company Limited, which my brother Henry and I had started up in 1955. We dealt with farmers buying and selling their grain and selling them seed grain, feedingstuffs, grass seeds, artificial fertilisers and spray chemicals. I attended markets at Berwick, Edinburgh, Reston, St Boswells and Hawick. There was very little disease on farms at the end of the war.

As you will all know the soil, the basis of all life, has been formed over millions of years by glaciation followed by the weathering of the rocks, an ongoing process. The soil also consists of organic material, decomposing animal and vegetable matter, which forms a growing media. It is made of many different elements which are necessary for a healthy plant life and growth. The main elements are phosphate, potash, nitrates and calcium. Also in the soil are thirty to forty trace elements, plus millions of bacteria and other small creatures. There are more bacteria in a teaspoonful of healthy soil than there are people in the world. We are still learning more and more about the soil each day.

When I went out with my notebook and pencil I had been told and I told the farmers that the fertiliser I was selling was complete for the job. It contained phosphate, potash and nitrogen for the crop that it was intended for. The farmers were pleased with the results that they saw. I did a lot of business. My business was also helped by the fact that because of the shortage of food, fertilisers were subsidised by the Government. The farmers found that it was much easier for them to sow one hundredweight

of artificial fertiliser than one ton of farmyard manure.

Farmers, however, discovered that after a year or two that they did not get the yields as before, but they did if they increased the amount of fertiliser sown.

Industrialists were buying up land to obtain new tax concessions, which the Government had introduced. This measure put up the price of land so farmers started using even more artificial fertilisers.

This talk is not a "knock" at the farmers. What I am trying to do is to show how farmers got involved in using so much artificial fertiliser. After the war they were encouraged to use it to increase food production and are still using it. Most of my friends are farmers and I admire their skills as engineers, builders, chemists, veterinary surgeons, stockmen and accountants.

Gradually I noticed that things "down on the farm" were "not so good". Disease was appearing in crops; the crops were going flat. Bugs, flies and underground grubs were attacking as well. Because of the lack of rotational farming weeds were also becoming more prolific. Stock was also affected by diseases and were dying off in their thousands. If they did not die they did not thrive.

Those attending this talk this afternoon do not have to be as good detectives as Monsieur Poirot or Inspector Morse to realise that it is the lack of trace elements which is one of the main reasons that is causing the problems. But this was not realised for quite a few years. However, our chemists who had manufactured the artificial fertilisers came to the farmers' "assistance" with chemical sprays.

Before I speak about the chemical sprays I would like to tell you what I observed was "not all that well" with the livestock side of the business. I first took an interest in trace elements when on an early visit to Hawick Market I obtained an order from Charlie Douglas of Rule Town Head, Hawick, for 10 tons of potassic mineral phosphate. He told me that he wished it to contain cobalt. I arranged for 2 lbs of cobalt to be mixed with every 7 cwts of this fertiliser, which was the rate of application per acre. The cobalt was required in that area to cure a disease of sheep called "pine" when the lambs do not grow and just "pine" away". Pine was very prevalent in the Jedburgh/Hawick area because of the thousands of lambs which had been taken off the hills and nothing put back for hundreds of years. Farmers now feed cobalt bullets to their stock.

Other farmers were having problems with their stock. Because pig farmers kept their pigs inside they had to inject them with iron. Dairy farmers were having to inject calcium when their

cows collapsed with milk fever. Another dairy farmer informed me that his calves were being born dead. They were devoid of red blood corpuscles. They were deficient in cobalt, iodine and iron. He was a very worried man. He got over this by feeding seaweed meal.

Tetany was another problem facing mainly the beef suckler cow herds. The cows died in their hundreds over the Borders. Magnesium was the deficiency this time.

Copper was another element causing a lot of concern in all stock. The deficiencies of manganese and selenium were also causing difficulties. It will continue.

Lime or calcium was another element that was important to stock and crop. Immediately after the war some lambs coming to market were no bigger than small white poodles. Mr Tom Elliot of Attonburn, Yetholm, gave me an order for 300 tons of ground limestone. This we spread for him by contract. The lambs were so desperate for the lime that they tore the bags apart to get at it. The lambs doubled in size within one year. This was the first lime this land had ever seen to my knowledge. Tractors and spreaders had arrived on the scene.

Analysis of the soil had arrived as well but one had to be very careful. A Galashiels farmer ordered some lime from me and applied it at 5 tons per acre. He got nothing but trouble as his lime had locked up trace elements in the soil. He should have applied the 5 tons over a period of years. This showed me that the soil could not be played with and anything that you added could have detrimental effects as well as beneficial effects.

In the period that I was in business the modern farmer was becoming a chemical farmer encouraged by the Government and the large chemical companies. Maybe I was partly to blame because if a farmer asked me for 50 tons of fertiliser I did my best to sell him 100 tons. What was the long-term effect to be on our land?

About this time I got suspicious about this chemical farming. I was beginning to learn and started to garden organically with straw, hens and calcified seaweed. I had virtually no disease on my crops in the garden. I am a keen fisherman and was amazed when my neighbour, a well known Berwick doctor, asked me if he could come and dig worms in my garden. He had none in his garden.

There are very few worms in agricultural land today. Charles Darwin wrote a book on the earth worm 100 years ago. It is entitled *Humus and the Earth Worm*.³ I have a copy. It has been forgotten about by our modern farmers and even by our soil scientists. He discovered many things. I wish I could tell you

them all, but time does not permit. Worms are essential for a healthy soil. The soil digested by a worm is six times more available to the plant. Worm casts contain enzymes, auxins and other organisms benefiting plants, animals and human beings. They drain the land to a depth of six feet, and aerate it at the same time. A few years ago farmers valued a farm on the number of worms per acre, not on its content of phosphate, potash and nitrogen. It is interesting to note that Charles Darwin corresponded with our Dr George Johnston. They both produced articles on earthworms.

I referred earlier to chemical sprays. These were first introduced to kill the weeds in the growing crops. Today nearly every weed can be "knocked for six" by modern chemicals. Scientists then discovered they could control the diseases which were attacking the crops. But nature was not having this and different strains of the diseases started to emerge. Different crop chemicals then had to be manufactured for this problem. New varieties of cereals were also introduced to combat the problem; they in their turn were knocked out, and so the battle is still going on today.

Insecticides were also introduced to kill the pests which were devouring the crops. The pests too grew an immunity to the chemicals and again the spray chemical manufacturers had to turn to a new product. The spray chemical manufacturers and the seed breeders were having a bonanza at the expense of the farmer. The biggest bills which a farmer has are for fertilisers and spray chemicals. What effect are these chemicals having on our soils and environment for future generations? Could not all this money be used to a better purpose?

The spray chemicals are completing the destruction of nature's way of life by killing off the natural predators which would have killed the devouring insects. In the soil I understand there are about 25% destructive insects and 75% beneficial insects.

So-called weeds are necessary in many ways. Many are deep rooted and bring to the surface many trace elements which by themselves start off catalytic actions in the soil. Many are herbs beneficial to man and beast. Many are hosts to flies which birds feed on. No wonder our partridge is becoming extinct. Weeds have many other uses. One Kelso farmer told me he had sprayed all his grass fields to kill the weeds. He admitted to me afterwards that his sheep went right off in condition.

The fertilisers we are putting on our land are locking up some trace elements and removing others in large quantities.

What happens to all these chemicals and fertilisers? Those that do not remain in the land are washed into our burns and rivers destroying insect life and fish. I quite agree with Jack Yallop

when he stated in his talk on "The waters of the Tweed" to the Berwick Probus Club, that the Tweed was just an open sewer. As a boy I could easily catch a dozen trout on the Whiteadder — today you have had a good day if you catch two or three and these are probably stocked fish.

All the rivers flow into the sea, the source of all life. What is happening to the sea with the dumping of all the waste material? I have heard that the North Sea is the worst sea in the world for pollution. All the sewage from Edinburgh is dumped off St Abbs Head. The Firth of Forth used to be famous for its oysters, now there are none. Closer to home I used to catch as a boy hundreds of shrimps at Cocklawburn Beach — I see no sign of them now.

Straw on many farms is a surplus product and is either burnt or sold off. By burning straw the farmers are releasing energy, heat and light — originally from the sun — which should have been used in the soil to help the bacteria and the worms. By selling it off the farming fraternity are selling trace elements and organic matter. The Roxburgh Estates, many years ago, would not permit a tenant to sell hay or straw from his farm.

Calcified seaweed was a product we sold latterly. It helped to cure certain diseases, e.g. tetany and orf. It contained calcium and trace elements in a balanced form. It benefited the soil, stock and crop. I could tell you of many benefits which I have noticed both in the garden and on the farm by using calcified seaweed.

I read in a magazine that cancer is now widespread in the so-called developed countries. These countries, Germany, France, Holland, Belgium, Britain and America are big users of artificial fertilisers. I am not saying that fertilisers cause disease; there could be many other causes:

Pollution of the atmosphere

Refined diet

Food additives

The stress of modern life;

but I do not think fertilisers help. If an animal can die from a disease assisted by a lack of certain trace elements is man immune?

Certainly all governments are very worried about the amount of nitrates in the water. I believe in Norfolk and Lincolnshire water is being pumped there from other areas because of the high nitrates in local water. A large quantity of nitrates is being used and the problem is being compounded. We have the highest water nitrate level in the world. Not only are there excessive nitrates in the water but also in our vegetables too. I am informed that excessive nitrates now in our bodies are weakening our

defensive mechanism against disease. Our cells are weakened by the nitrates — rather similar to the plant cells being weakened by the excessive nitrate fertiliser.

I do not think that Dr Johnston would be very pleased if he learned how we are killing off our birds and animals in the country. Even the hares and the hedgehogs are disappearing. Surely they have just as much a right to live as we have? At least they do not go round killing off their own kind. Dr Johnston, I am sure, would believe that these animals were sent into the world to balance our way of life and to keep us company. I believe this too.

As a boy living in Berwick I was often woken by the dawn chorus. How many of you today are woken by the dawn chorus?

As I write this talk, two articles have appeared in *The Scotsman*, one dated the 15th September 1993 headed "Agronomist urges re-think on the use of fertilizers"; he is Mr Jeff Paulson, Agronomic Development Manager for one of the leading UK fertiliser producers, 'Hydro Agri'. This is very significant. The other article dated the 23rd August 1993 is headed "approved insecticide said to be poisoning farmers". Perhaps this talk might annoy some farmers but it might help to save the lives and health of all those involved in working on the land — farmers, farm workers and contractors. Prevention is better than cure. This latter article in *The Scotsman* claims that thousands of agricultural workers are afflicted with symptoms of organo-phosphorus poisoning mainly from sheep dip.

Conclusions

It is not all doom and gloom; the message is getting through. Farmers in the Borders are reducing the amount of fertilisers and chemicals that they purchase. Many would like to, but cannot for economic reasons. They have to make a living the same as everyone else. Many are using organic methods. The Soil Association and the Henry Doubleday Research Organisation are influencing this country in the ways of organic farming and gardening.

Our Government is shortly to give grants to assist organic farming and to allow farmers to leave wider hedgerows for our wildlife. These grants are very small but it is a start. The dumping of sewage off St Abbs Head is to stop. The burning of straw has stopped. Some large supermarket chains are donating money to encourage organic farming.

What other things can be done to obtain a sustainable and holistic agriculture for future generations? Firstly the use of nitrogenous fertilisers should be stopped or severely curtailed,

a gradual return to rotational farming should be encouraged and a use of more leguminous (nitrogen fixing) crops.

By using organic methods it is estimated that production might fall by 30%, therefore is this not the time to encourage it when we are producing a surplus to our requirements? The "hated set aside" could be a thing of the past. A lot of research went into chemical farming both by the Government and the chemical producers. If more research went into the rotational farming techniques using natural methods yields would not be far behind the yields of chemical methods. Sewage will eventually have to go back on to the land — more research is needed here. It shows that a massive input of cash is required from the Government if the changes are to take place. The Government subsidised farmers' use of fertilisers; now let them subsidise farmers for not using them. All governments should be concerned with the ecology of the world. Action is needed now — not next year.

To go back to my father. He instructed me as follows: when you leave the world, if you have a garden or a farm, leave it in a better state than when you took it over. If a fisherman, leave the river in a better state, and before you leave the world leave it in a better state. I don't think I am doing very well.

I can only hope that members of the Berwickshire Naturalists' Club will do all they can to assist our farmers in reaching a sustainable agriculture for the benefit of all mankind.

NOTES AND REFERENCES

1. Voisin, André (1959) *Soil, Grass and Cancer*. Crosby Lockwood and Son Ltd, London. 1.
2. Dr Johnston's appreciation appears in the *History of the Berwickshire Naturalists' Club* III, 1850-1856, 202.
3. Darwin, Charles (1881) *Darwin on Humus and the Earthworm*, John Murray 1881. Faber and Faber Ltd, London, 1945 edition, 4th impression 1966.

THE SIXTEENTH CENTURY BORDER LAIRDS: A STUDY OF THE LINKS BETWEEN WEALTH AND HOUSE BUILDING

Dr Maureen M. Meikle¹

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The typical view of sixteenth-century Border Lairds is one of marauding cattle thieves who terrorised the frontier country, with the willing help of their kinsmen. This image persists as part of the popular mythology of the Anglo-Scottish Borders. Local summer festivals in the Scottish Borders value their 'Reiver' connections, but whether this is a true representation of what happened over four hundred years ago is now open to question. The laird class of Border society did include some notorious thieves, but it would be unfair to suggest that these men were representative of all the lairds. Border lairds usually derived their income from legitimate sources and they seem to have indulged in widespread house building in the later sixteenth century, but we need first to identify these landed men and their sources of income.

In the sixteenth century Scottish lairds were not a homogeneous group. Though they shared a common interest in land, these lairds can be divided into at least four socio-economic groupings. These are the greater, lesser, lesser or bonnet lairds and finally bonnet lairds.² In the Eastern Borders there were high numbers of these types of lairds. Their surnames and properties are of interest to both genealogists and local historians, as only a few of these laird families have survived into the twentieth century.

Lairds of the Eastern Borders

Greater Lairds (40)

Bennet of Chesters.	Douglas of Melrose.
Cairncross of Colmslie.	Edmonston of that Ilk.
Chirnside of East Nisbet.	Hepburn of Whitsome.
Cockburn of Choicelee.	Home, Lord and laird of
Cockburn of that Ilk.	Home.
Cockburn of Langton.	Home of Ayton.
Cranston of Corsbie.	Home of Cowdenknowes.
Cranston of Thirlestane	Home of Eccles.
Mains.	Home of Huttonhall.
Douglas of Bonjedward.	Home of Manderston.

Home of Polwarth.
 Home of Spott.
 Home of Wedderburn.
 Ker of Ancrum.
 Ker of Cessford.
 Ker of Faldonside.
 Ker of Ferniehirst.
 Ker of Hirsell.
 Ker of Primsideloche.
 Lauder of that Ilk.
 MacDougal of Makerstoun.

Lesser Lairds (218)

Ainslie of Falla.
 Ainslie of Thickside.
 Angus of Hoprig.
 Aitchison of Slighhouses.
 Auchinleck of Cumledge.
 Bog of Boghouses.
 Borthwick of Collielaw.
 Brounfield of Eastfield.
 Brounfield of Gordon Mains.
 Brounfield of Greenlawdean.
 Brounfield of Hardacres.
 Brounfield of Nether Mains.
 Brounfield of Pittlesheugh.
 Brounfield of Tenandry.
 Brounfield of Todrig.
 Brounfield of Whitehouse.
 Burn of Elisheugh.
 Cairncross of Allanshaws.
 Cairncross of Calthill (Hillslap)
 Carmichael of Edrom.
 Chirnside of Whitsomelaws.
 Cockburn of East Borthwick.
 Cockburn of Caldra.
 Cockburn of Stobswood.
 Cockburn of the Woodhead.
 Cranston of Falwoodshiel.
 Cranston of Kirkhill.
 Craw of Flemington-Fluris.
 Craw of Gunsgreen.
 Craw of East Reston.
 Craw of Swinwood.
 Davidson of Samieston.

Maitland of Thirlestane.
 Nisbet of that Ilk.
 Ormiston of that Ilk.
 Pringle of Galashiels.
 Pringle of that Ilk.
 Ramsay of Dalhousie.
 Renton of Billie.
 Rutherford of Hundalee.
 Rutherford of Hunthill.
 Seton of Greenknowe.
 Swinton of that Ilk.

Dickson of Belchester.
 Dickson of Bughtrig.
 Dickson of Herdrig.
 Dickson of Kames.
 Dickson of Overmains.
 Dickson of the Peel.
 Dickson of Whitrig.
 Douglas of Mordington.
 Douglas of Timpendean.
 Duns of Grueldykes.
 Edgar of Flass.
 Edington of that Ilk.
 Edington of Harcarse.
 Edgar of Wedderlie.
 Ellem of Bassendean.
 Ellem of Butterdean.
 Ellem of Renton.
 Erskine of Shielfield.
 French of Thornydykes.
 Frissell of Overton.
 Galbraith of Easter Windshiel.
 Gladstone of Cocklaw.
 Graden of Earnslaw.
 Graden of Langrig.
 Grahamslaw of Newton.
 Haig of Bemersyde.
 Haitlie of Broomhill.
 Haitlie of Hurdlaw.
 Haitlie of Lambden.
 Haitlie of Mellerstain.
 Haitlie of Sneep.

Haliburton of Mertoun.
 Haliburton of Muirhouselaw.
 Haliburton of Newmains.
 Hamilton of St John's
 Chapel.
 Hangingside of that Ilk.
 Hepburn of Fairnington.
 Hepburn of Rollandstoun.
 Heriot of Trabrown.
 Home of Bassendean.
 Home of Bellitaw.
 Home of Blackadder East.
 Home of Blackadder West.
 Home of Blacksmill.
 Home of Broomhouse.
 Home of Carolside.
 Home of Cheeklaw.
 Home of Cranshaws.
 Home of Crossrig.
 Home of Crumstane.
 Home of Edrom.
 Home of Fairnieside.
 Home of Fans.
 Home of Fishwick.
 Home of Framepath.
 Home of Hardiesmill.
 Home of Godscroft.
 Home of Hilton.
 Home of Hutton.
 Home of Hutton Bell.
 Home of Home abbot of
 Jedburgh.
 Home commendator of
 Jedburgh.
 Home of Lauder.
 Home of the Law.
 Home of Ninewells.
 Home of Prenderguest.
 Home of Reidheuch.
 Home of Renton.
 Home of West Reston.
 Home of Rollandstoun.
 Home of Slegden.
 Home of Tinnis.
 Home of Whitchester.

Hunter of Williamlaw.
 Ker of Broomlands.
 Ker of Cavers.
 Ker of Chatto.
 Ker commendator of Cold-
 stream.
 Ker of Corbethouse.
 Ker of Dalcove.
 Ker of Gateshaw.
 Ker of Graden.
 Ker commendator of Kelso.
 Ker of Kippilaw.
 Ker of Lintalee.
 Ker of Linton.
 Ker of Lochtower.
 Ker of Mainhouse.
 Ker of Maisondieu.
 Ker of Mersington.
 Ker of Middlemist Walls.
 Ker of Milnrig.
 Ker of Newhall.
 Ker of Little Newton.
 Ker of Newton.
 Ker of Ormiston.
 Ker of Oxnam.
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 Ker of Shaws.
 Ker of Shielstockbraes.
 Ker of Sunderlandhall.
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 Ker of Yair.
 Kirkton of Stewartfield.
 Lauder of Burngrange.
 Lauder of Edington.
 Lauder of Muircleugh.
 Lauder of Newbigging.
 Lauder of Whitslaid.
 Linlithgow of Drygrange.
 Lumsden of Blanerne.
 Lumsden of Rikilside.
 MacDougal of Floors.
 MacDougal of Manorhill.

MacDougal of Stodrig.
 Mow of that Ilk.
 Mow of Mow Mains.
 Newton of Graden.
 Nisbet of Raashill.
 Nisbet of Spital.
 Nisbet of Swansfield.
 Ormiston of Grahamslaw.
 Ormiston of Old Melrose.
 Ormiston of Easter Muirdean.
 Ormiston of Westhouses.
 Pringle of Nether Blainslie.
 Pringle of Blindlee.
 Pringle of Buckholm.
 Pringle of Charterhouse.
 Pringle of Clifton.
 Pringle of Craigleith.
 Pringle of Hownam.
 Pringle of Langmuir.
 Pringle of Muircleugh.
 Pringle of Muirhouse.
 Pringle of St John's Chapel.
 Pringle of Slegden.
 Pringle of Stitchill.
 Pringle of Torquhan.
 Pringle of Torwoodlee.
 Pringle of Trinlyknowe.
 Pringle of Westhousebyre.
 Pringle of Whytbank.
 Pringle of Wrangholm.
 Purves of Purvishaugh.
 Ramsay of Wyliecleugh.
 Redpath of Angelraw.
 Redpath of Crumrig.
 Redpath of Greenlaw.
 Redpath of that Ilk.
 Redpath of Rowchester.

Redpath of Todrig.
 Renton of Cockburnspath
 Shiels.
 Riddall of that Ilk.
 Robson of Gledswood.
 Rule of Peelwalls.
 Rutherford of Chatto.
 Rutherford of Edgerston.
 Rutherford of the Grange.
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 Rutherford of Littleheuch.
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 Seton of Gordon.
 Shoreswood of Bedshiel.
 Sinclair of Blainslie.
 Sinclair of Longformacus.
 Sleigh of Birkininside.
 Sleigh of Cumledge.
 Sleigh of Otterburn.
 Spence of Chirnside
 Mains.
 Spottiswoode of Quhitlie.
 Spottiswoode of that Ilk.
 Spottiswoode of Whinrig.
 Stewart of Eildon.
 Tait of Cherrytrees.
 Trotter of Catchelraw.
 Trotter of Chesters.
 Trotter of the Overhall of
 Sisterpath.
 Trotter of Printonan.
 Trotter of Ryslaw.
 Young of Otterburn.
 Young of Feltershaws.

Lesser / bonnet Lairds. (33)

Brounfield of Farnyrig.
 Brounfield of Howlawhead.
 Brounfield of Whiteside.
 Burn of Coate.
 Cairncross of Birksneep.
 Davidson of Easter Fowmer-
 ton.
 Douglas of Bankend.

Fala of Wells.
 Frissell of Quarrelbush.
 Hog of Old Roxburgh.
 Home of Chirnside East
 Mains.
 Home of Crumiecruke.
 Home of the Fleurs of
 Coldingham.

Home of Simprim.
 Home of Whiterig.
 Ker of Kerchesters.
 Ker of Lauder.
 Ker of Melrose.
 Nisbet of Nether Raecleugh
 Paxton of Auchencrow.
 Pringle of the Bents.
 Pringle of Tan Law.
 Purves of that Ilk.
 Pyle of Millheugh.
 Rutherford of Cleethaugh

Rutherford of the Know of
 Nisbet.
 Rutherford of the Walls of
 Nisbet.
 Tait of the Stankford.
 Trotter of Fogo.
 Trotter of Fogorig.
 Trotter of Foulshotlaw.
 Trotter of Harcarse.
 Trotter of the Netherhall
 of Sisterpath

Bonnet Lairds. (15)

Birgham of Birgham.
 Craw of Renton.
 Craw of Upsettlington Shiels.
 Davidson of Harden.
 Davidson of the Kaims.
 Davidson of Marchcleuch.
 Davidson of Wooden.
 Dickson of the Loanhead.

Duns of East Borthwick.
 Fairbairn of West Gordon.
 Home of Middlethrid.
 Ker of Bloodlaws.
 Ker of Softlaw.
 Ker of Templeland
 Pringle of Fans.

The lairds of the Eastern Borders therefore ranged from a humble bonnet laird, who could own and farm as little as fifty-two acres (two husbandlands), to the great surname chiefs who owned vast acres and commanded a huge kinship following. The greater lairds were above farming their own land. They usually leased their farms to kinsmen and other tenants, reserving a home farm for their own household requirements. The bulk of the lairds were categorised as lesser lairds. They were not as impoverished as the bonnet lairds, or those who bordered between being lesser or bonnet lairds, but they lacked the wealth and political power of the greater lairds. Families could naturally rise and fall within these landed circles, though these particular lairds were more fortunate than their ancestors.

The sixteenth century witnessed dramatic changes in the land market that opened up new opportunities for many lairds and their sons. Principal amongst these benefits was the feuing (or leasing) of crown, church and monastic land to laymen in perpetuity. Those fortunate enough to gain these leases were known as feuars and though they were not exclusively lairds, the larger grants inevitably went to landed men, wealthy merchants or substantial office-holders. For example, the Pringles of Torwoodlee were substantial feuars of land in Ettrick Forest and John Stewart of Eildon had no fewer than twenty-one tenants

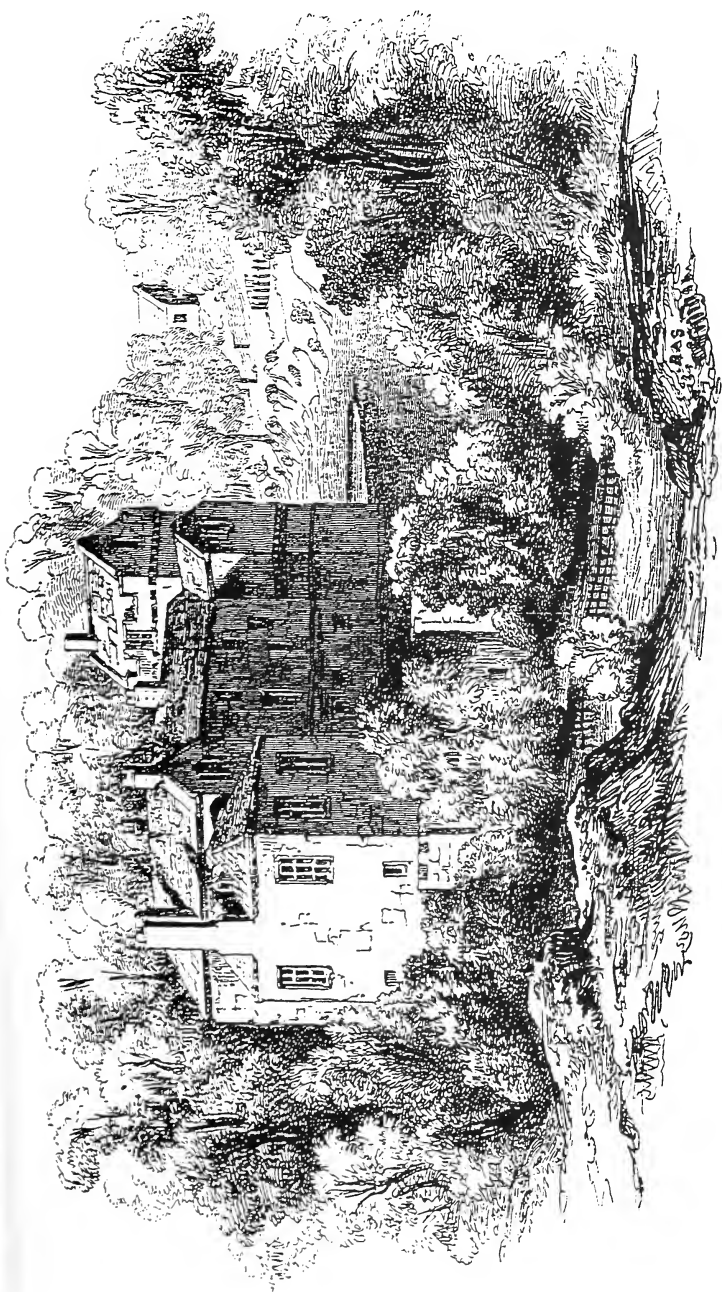
on the land he feued from Melrose Abbey.³

Feuing accounted for much of the new wealth in the Borders, as elsewhere in sixteenth-century Scotland. This was sometimes the explanation for conspicuous consumption by the lairds, but there were other factors to be considered. Some of the lairds were successful at court, gaining offices and gifts from the crown. There was also the possibility of serving in the Border administration with its resultant prestige and remuneration.

It would take a book to explain all the known facts about all these Border lairds and their particular houses, so a sample of half a dozen lairds have been chosen for this paper to illustrate the effects of newly-acquired wealth and prestige. They are the Homes of Cowdenknowes and Huttonhall, the Cairncrosses of Colmslie and Hillslap (Calfhill), the aforementioned Pringles of Torwoodlee and the Kers of Ferniehirst. Most of these lairds were in the greater laird category, with the exception of Cairncross of Hillslap and Pringle of Torwoodlee. Unfortunately, little documentation survives about the bonnet lairds so I have reluctantly omitted them from the sample. This does not imply that there is an abundance of information on the greater lairds, though it is sometimes the case that their houses and family papers have been preserved. Many of the sixteenth-century buildings have been lost through time and this makes historical detection difficult. However, there are enough examples left to demonstrate the remarkable variety of fortified buildings in the Borders, including the more civilised country-house type,⁴ as well as the more familiar Border tower house.

The respective wealth of these chosen lairds should be highlighted before discussing their house-building ventures in the sixteenth century. Their income from agriculture was dependent upon good harvests and adaptable leases, but land in itself was a useful source from which to raise credit. Many lairds borrowed money to build new houses or to adapt older buildings. Income did not necessarily come from property in the countryside as some lairds owned land in burghs. For example, the Kers of Ferniehirst owned fourteen burghages and other properties in Jedburgh.⁵ The acquisition of a monastic house and its lands was also lucrative, as the Homes of Cowdenknowes discovered when they gained control of Eccles Priory.⁶ The lands owned by the lairds were not confined to the Borders for the Kers of Ferniehirst owned Sydserf in East Lothian in 1576 and the Cairncrosses of Colmslie had properties in Inverness-shire, Midlothian, Edinburgh and Stirling.⁷ However, the bulk of these lairds' lands were in the Borders.

The first of these selected lairds, the Homes of Cowdenknowes,



View of Coldingknows.

Plate 1. Cowdenknowes, c. 1840.



Plate 2. Cowdenknowes, c. 1989.

lived in the heart of Lauderdale. They were descendants of the first Lord Home and had been granted Cowdenknowes by James IV in 1506. By a quirk of fate they became the earls of Home when the second earl died, without children, in 1633,⁸ yet for much of the sixteenth century they were greater lairds who gathered their rents and served their country in time of war. They intermarried with other Border laird families, though they eventually broke into the ranks of the nobility in the later sixteenth century when Sir John Home (died 1629) married a half-sister of the earl of Bothwell and his younger brother, James, married a daughter of Lord Home. The Homes of Cowdenknowes were ascendant at the Scottish Court by this time and were very much at the centre of political intrigue. Sir James Home (died 1596) had managed to join the most powerful political faction of the 1570s and as a result of this he was made warden of the Scottish East March, bailie of the earldom of March, a privy councillor, a gentleman of the bedchamber to James VI, a commissioner for both wappinshaws (musters) and against Jesuits in Berwickshire and finally the captain of Edinburgh Castle.⁹ He was undeniably successful and to show off his newly-acquired status he began to alter his home at Cowdenknowes, which had come into his possession after his father's death in 1573.

The original tower at Cowdenknowes was built before 1554. It was evidently still standing in 1574, despite an attempt by the English to blow up the tower in 1546.¹⁰ Sir James decided to extend the property by adding a mansion house in 1574 and a further tower beside the river Leader in 1581. All three buildings were connected by a curtain wall that enclosed a considerable courtyard. A door lintel in the mansion has the initials S.J.H.V.K.H. 1574 representing Sir James and his wife Katherine Home of Blackadder. There is also a panel with the motto 'Feir God. Flee From Sin. And Mak For The Lyfe Everlasting', reflecting the Homes' adherence to the reformed church. Panels like this are not uncommon as there is a similar panel at nearby Holydean.¹¹ The present house has extensive Victorian additions that rather take away the impact of the sixteenth-century building. In 1868 James Tait wrote about Cowdenknowes in the Berwickshire Naturalists' Club's *History* and described it as a mansion belonging to the sixteenth century 'in the baronial style of the Elizabethan period'.¹²

These additions to Cowdenknowes were probably funded by loans from friends that were subsequently paid back from the fruits of office. For instance he had borrowed 200 merks¹³ from his deceased brother-in-law Robert Cairncross of Colmslie in 1574, but received £20¹⁴ *per annum* as bailie of March, £100 expenses

for forfeiting Walter Davidson in Raperlaw during 1577 and £700 *per annum* as captain of Edinburgh Castle.¹⁵ When he died on 16 April 1596, Sir James left an inventory of moveable goods totalling £7545 3s. 4d., including £2000 worth of personal effects, but he owed £11844 and thus died in debt. Some of these debts may have related to his captaincy of Edinburgh Castle as he owed James Purves, a flesher, £1440, but they could equally be accounted for through good living! These arrears were only for Sir James' household for it is known that his eldest son John kept a separate household after he married in 1587, but it should be remembered that inventories only reflected the moveable wealth of the deceased and did not take into account their lands and properties that could be worth far more.¹⁶

Although the Cairncross lairds at Colmslie and Hillslap were related to the Homes of Cowdenknowes, they were different types of lairds. They had links with the mercantile community in Edinburgh, but they also gained financially from their relationship with Robert Cairncross, the pre-reformation bishop of Ross and one time monk of Melrose.¹⁷ The Cairncrosses were part of Lauderdale society as they intermarried with local lairds' families and held the majority of their lands in the locality.¹⁸ These lands were held in feu from Melrose Abbey at very reasonable rates. For example, Colmslie (alias Selmure) was leased for fifty pats of butter *per annum* or 6s 8d a pat in money and Hillslap, once known as Calfhill (alias the Eastside of Ladhopenmuir) was a bargain at £10 a year.¹⁹

The Cairncross lairds, Robert of Colmslie and his younger brother Nicol, the first laird of Hillslap, seem to have been both lending and borrowing money at the same time. In October 1554 Robert wadset (mortgaged) the west half of the lands of Blythe, near Lauder, to the widow of James Haliburton an Edinburgh burgess for 1000 merks. The following March Robert accepted a wadset from George Home of Spott of lands in Hartside, East Lothian.²⁰ When he died in 1573, Robert had moveable goods worth £1870. He was owed £1262 by debtors, though his creditors were due a modest £154. Nicol wadset Hillslap on several occasions during the mid 1570s to Mr Thomas Weston, an Edinburgh advocate, yet by 1587 he had built his new tower house and was even prepared to lend 2500 merks to Sir William Ker of Cessford.²¹

It is possible that Nicol was more successful than the original branch of Colmslie in the 1570s and 1580s. Hillslap tower was built in 1585 with some unusual architectural features such as Tudor hood-moulds on the lintels. It was in a semi-ruinous, though reasonable, condition in the 1970s and has since been

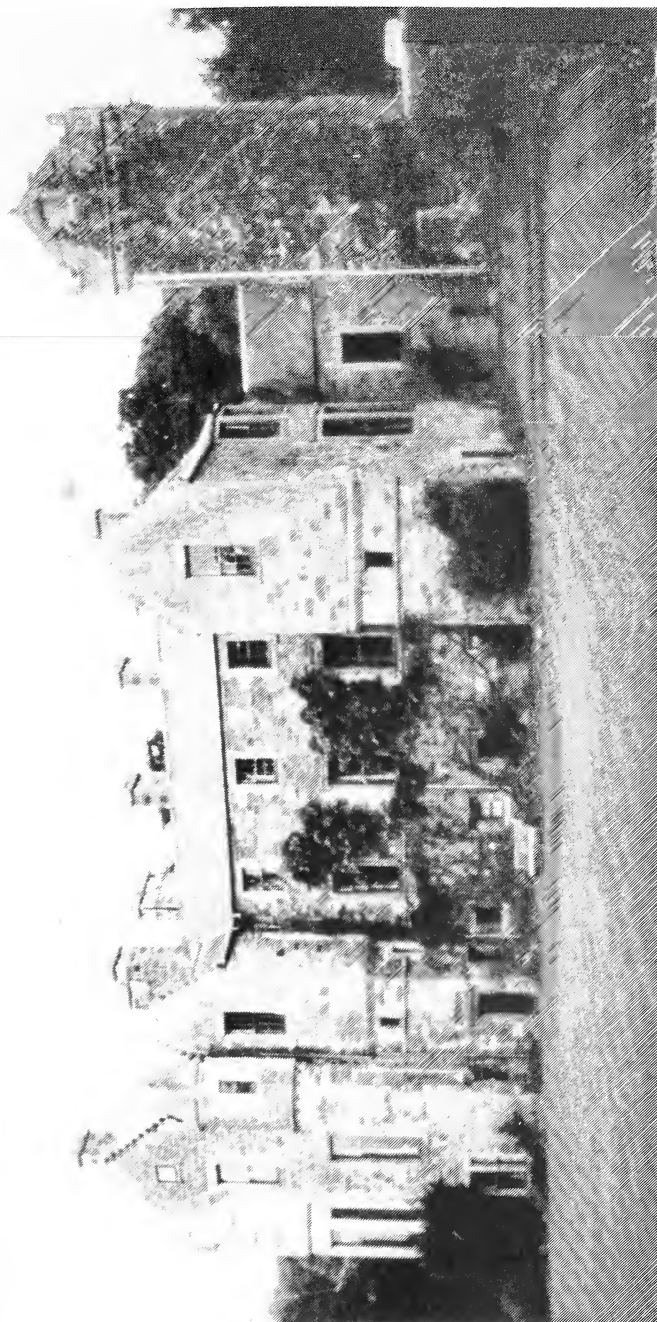


Plate 3. Hillslap restored, 1989.



Plate 4. Aerial view of Hillslap, Colmslie and Langshaw, 1985.
Crown copyright: RCAHMS.

fully restored.²² Colmslie Tower already existed, but William Cairncross did not want to be overwhelmed by his uncle's opulent building as it was a mere stone's throw from his own tower. He therefore altered Colmslie in the mid 1590s, though very little of this tower remains today. And not to be outdone by his Cairncross neighbours, James Pringle of Whytbank built a tower at Langshaw in the later sixteenth century as well. These three towers, or what remains of them, are within half a kilometre of each other and the lands they stand on were all feued from Melrose Abbey. This did lead to some friction in 1572-73 when Robert Cairncross feuded with James Pringle of Whytbank over Langshaw.²³ Robert's son and heir, William, was evidently a forceful character as well. In 1593 he ordered James Hamilton, tutor of his nieces Margaret, Marie and Jean Hamilton of St John's Chapel in Lauderdale, to pay out their bairns' portion from the estate of his late brother-in-law John Hamilton. As a postscript he added an instruction that James was to wed his only unmarried sister Jean or pay him 2000 merks!²⁴ The Cairncrosses definitely had business acumen for they never held any high offices from which to gain wealth. Nevertheless, they were fortunate to be close relatives of a generous bishop.

It was more common for Border lairds to exploit their relationship with a lord, than a bishop. The Homes of Huttonhall were similar to the Cowdenknowes branch in that they were descendants of a Lord Home, although in their case they were illegitimate descendants of the third lord. Illegitimacy does not appear to have barred these Homes from inheriting or acquiring some property from their father. John Home was first granted Huttonhall in 1534 by his sister Elizabeth. She had procured the lands from the Kers of Samuelston in 1532, but it was likely that her father bought the lands on her behalf. The Homes feued the land thereafter from Lord Home, for £20 *per annum*. John's legitimated son Alexander inherited Huttonhall in 1557 and when he died in 1594 the estate passed to the first Home of Huttonhall to be born within wedlock, his eldest son John.²⁵

The Homes of Huttonhall feued crown land in other parts of Berwickshire and managed to gain some monastic leases from Jedburgh and Abbey St Bathans, which were in the hands of Lord Home's kindred. The prioress of Coldstream also granted them lands.²⁶ There is little doubt that their close kinship to Lord Home enabled them to accumulate property in the 1530s, but the consolidation and expansion of these lands in future decades would be dependent on their own survival and success at court. As with the Homes at Cowdenknowes, it was a later generation that achieved most. Alexander Home made considerable sums

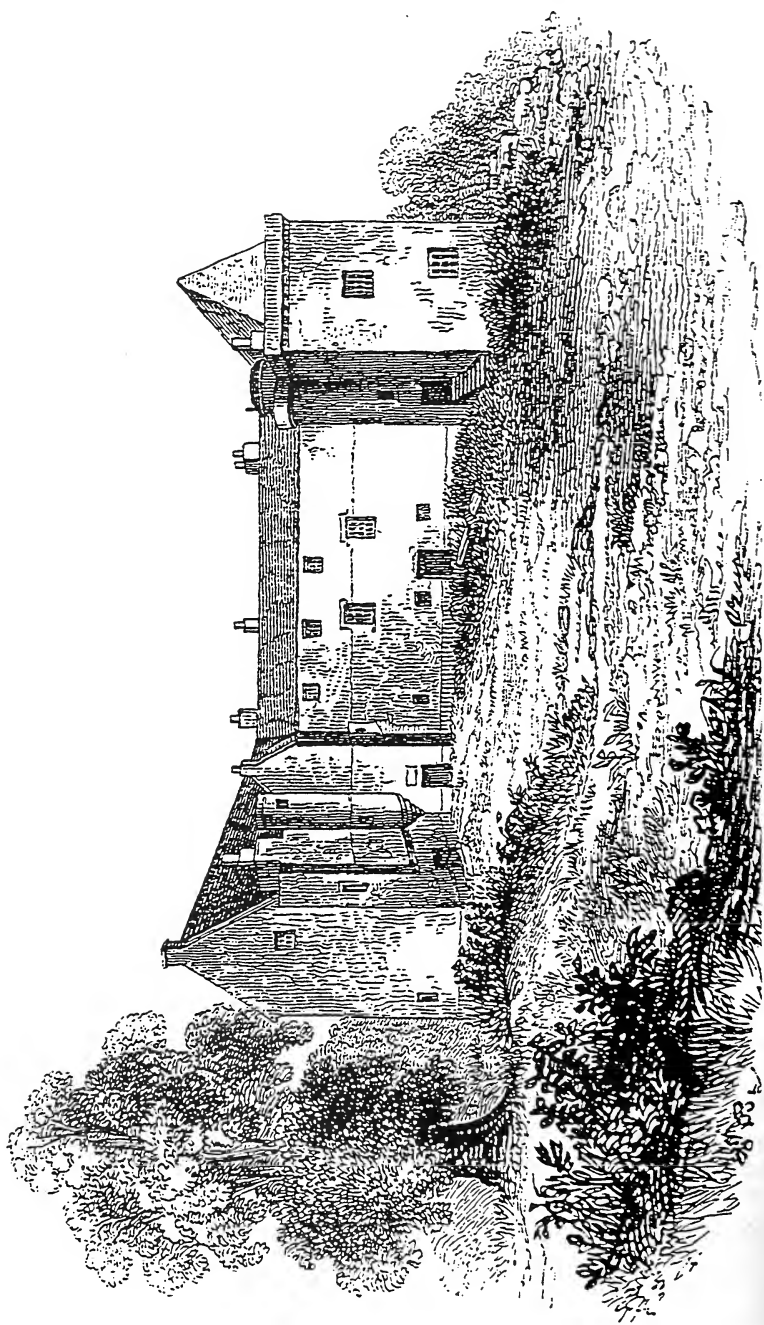


Plate 5. Huttonhall, c. 1840.



Plate 6. Huttonhall, c. 1880.

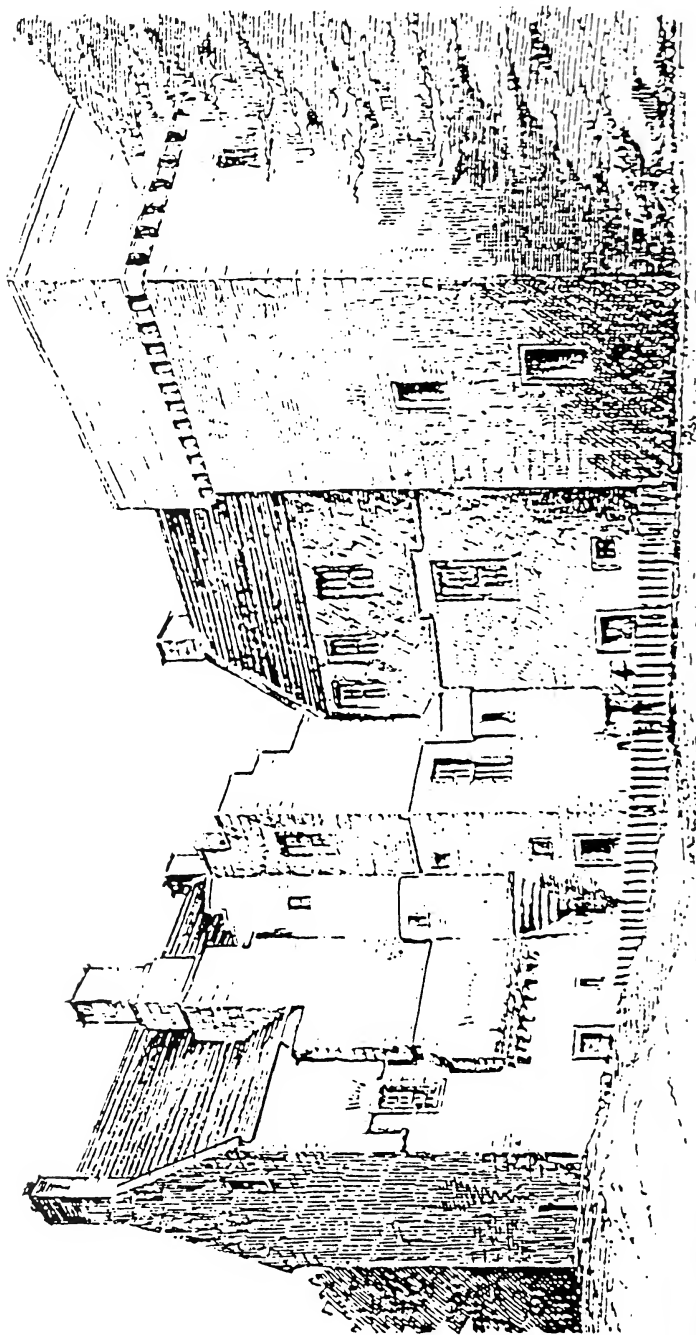


Plate 7. Huttonhall, late 1880s.

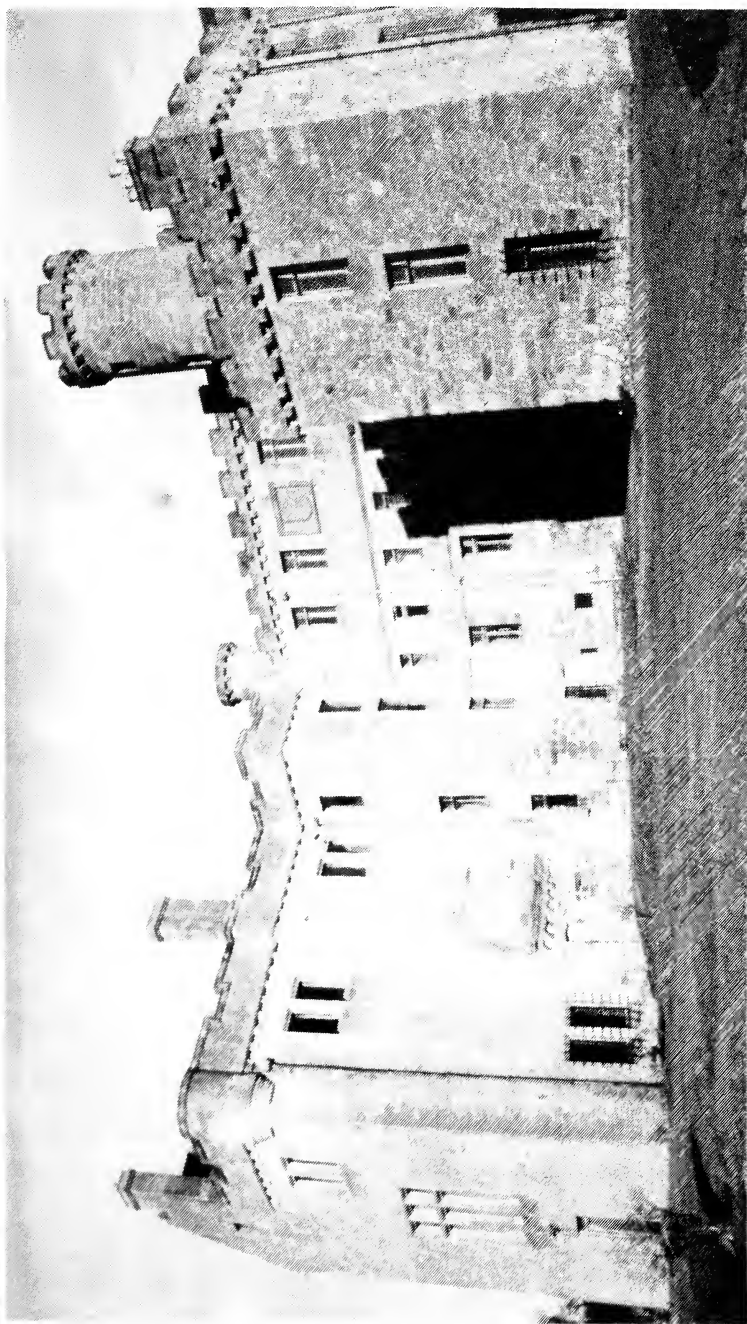


Plate 8. Hutton Castle, 1987.

from his feued lands as the rentals remained static in a period of inflation. He also acquired much monastic property and rights to teinds such as those of Over and Nether Nisbet near Jedburgh.²⁷ In fact he was prosperous enough to help the debt-laden sixth Lord Home in 1591 when he purchased Ladykirk, Framepath, Hardiesmill and Quixwood as well as lands near Abbey St Bathans, Kelloe, Reedyloch and Chirnside, including the patronage of Chirnside Parish Church, for 6000 merks.²⁸

Alexander was a friend and counsellor to the young Lord Home, but he was also a highly-respected Borderer. He served as a Border Commissioner in 1585, 1588 and 1591, was deputy warden of the East March from 1582 until his death, a commissioner against Jesuits and deputy bailiff of Coldingham Priory for Lord Home. His son, John, continued two of his East March offices after his death as deputy warden and commissioner against Jesuits. John, however, managed to go further by being appointed a gentleman of the bedchamber to James VI in 1601.²⁹ The Homes were a dominant force in the Scottish court during the 1590s, so this appointment was probably gained through the preferment of his kinsmen.

Alexander had married Isobel Home of Carolside, a remote cousin of lesser laird ranking. They had six surviving sons and five daughters, who were well provided for in Alexander's will. He left future tochers (dowries) totalling 9000 merks, being 3000 merks to Jane and 2000 merks each to Barbara, Isobel and Alison. Elizabeth, who had already married John Seton of Touch, had the rest of her tocher paid. His heir, John, had also married in 1590. His bride was a friend of the Homes, Elizabeth Carmichael, of the greater gentry family of Carmichael of the Ilk, of the West March. Her tocher amounted to 10000 merks.³⁰ John was executor to his father and honoured all these financial agreements, as well as providing for his mother. Alexander left an impressive inventory totalling £4651, though he owed his creditors £4501. However, he had many debtors and they were due to pay his estate £5361. He apparently did not hound friends and kinsmen for repayment³¹ and had been generous to his kinsmen in time of need such as James Home of the Style to whom he lent 800 merks in 1589.³²

Huttonhall, or Hutton Castle as it is known today, is another interesting example of a Border laird extending a small tower into a mansion house to show off his newly-acquired wealth and status. The tower was besieged and burned by English raiders in 1542 and again in 1544.³³ This damage was presumably repaired, though it was not until the time of Alexander that expansion took place. The well-known architectural historians

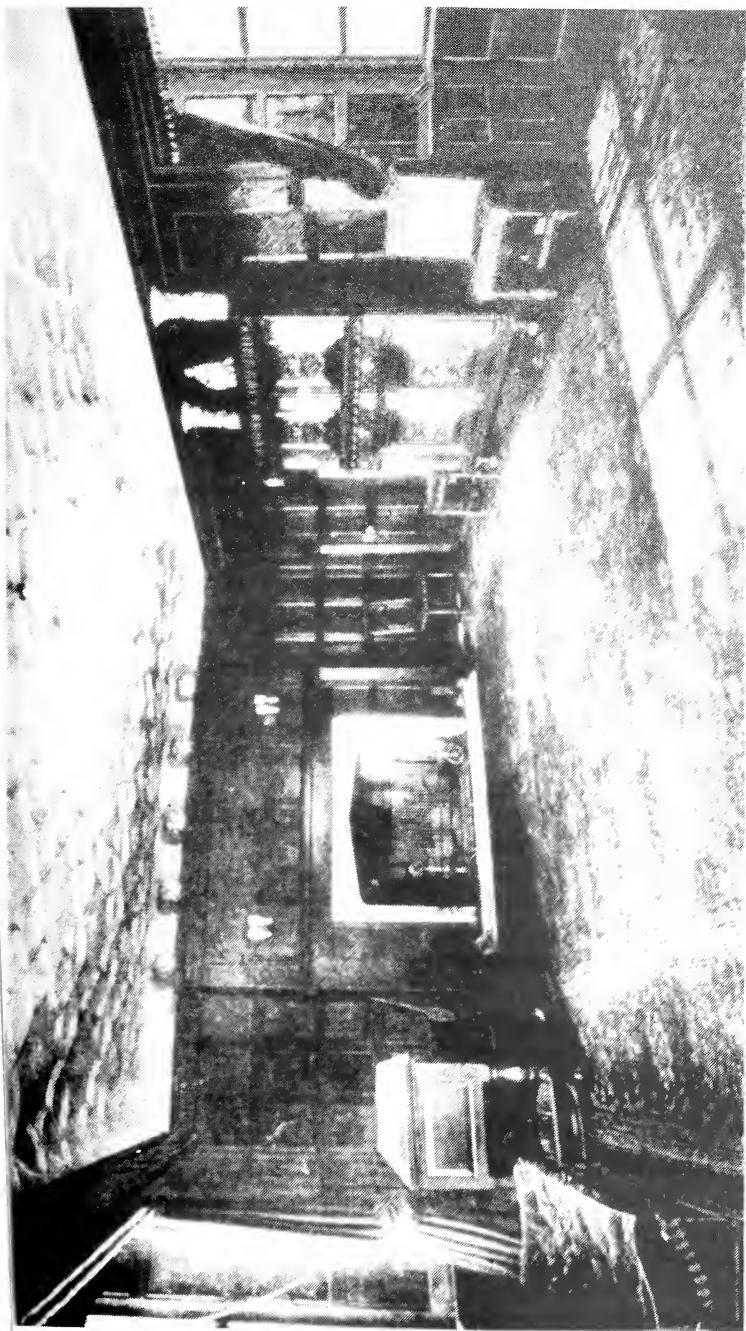


Plate 9. Alexander Home of Huttonhall's Dining Room, photographed in 1915.

of Victorian times, MacGibbon and Ross, have dated his L-shaped extension of the hall to 1573, possibly as a result of Huttonhall being confirmed to him by the Privy Council in 1567, though an English ransom of £1500 (£300 sterling) must have helped as well.³⁴ As with Cowdenknowes there was a large enclosed courtyard for the new house. In 1585 Huttonhall was described as 'a maist godlie and comfortable house'.³⁵ The panelled dining room of the new house, with its beautiful plaster-work ceiling, was used by many distinguished visitors in the later sixteenth century and survived intact until 1915 when the estate was sold to Sir William Burrell. Burrell, being a wealthy antiques collector, found the ceiling and panelling too plain for his acquired taste and thus destroyed them. He replaced Alexander Home's panelling with some from Harrington Hall in Lincolnshire and it is this room that is now on display at the Burrell Collection in Glasgow.³⁶ Burrell also dismantled the vaulted ground floor and added huge rooms to the west wing, taking the heart out of the sixteenth-century house. The heraldic panel over the original front door is slightly puzzling as it is undated. The letter AH and EH were incorporated into the panel, though it is now weathered. Alexander Home was married to Isobel Home, so this is either a mistake or it may refer to another Alexander Home and his wife Elizabeth Home of the mid-seventeenth century.³⁷

Huttonhall has been altered many times since the sixteenth century. The original tower once had a steep roof with gables, yet by the mid-nineteenth century it was ruinous. This tower was rebuilt as MacGibbon and Ross reported that the tower had 'lately been built up and covered with a platform roof' when they surveyed the castle in the late 1880s.³⁸ In the eighteenth century the whole building had been semi-ruinous, but it was certainly inhabited in the mid-nineteenth century. It was modernised by Lord Tweedmouth after he purchased the estate in 1876,³⁹ and was extensively altered by Sir William Burrell and his various architects thereafter. Huttonhall received poor treatment after Burrell gifted his collection to Glasgow City Council in 1944. They eventually stripped everything of value from the building.

There are, of course, many sixteenth-century lairds' houses that have completely disappeared or have been left in a far more ruinous state than Huttonhall and Torwoodlee is one such example. Although this ruin is of a house built in 1601, it is part of the sixteenth-century tradition of lairds improving their homes. The Pringles were lesser lairds descended from the Pringles of Galashiels. They were feuars of Caddonlee, Glengaber and Torwoodlee (alias Hillend) in the crown land of Ettrick Forest.⁴⁰ Their total feu duty was £67 19s. 12d., of which £33 6s. 8d. was

for Torwoodlee and its mill. Torwoodlee seems to have been their main residence in the sixteenth century as they took their territorial designation from here and it is well-known that the Elliots sacked the old tower in December 1568, killing the laird, George Pringle, in the process.⁴¹

The Pringles intermarried with other lesser laird families and do not appear to have sought upward mobility from this rank. However, they did have to establish themselves as lesser lairds during the first half of the sixteenth century for feuars of large tracts of land were not automatically accepted as lairds. There are references to the Pringles 'in' Torwoodlee during James V's reign and then records note them as being 'of' Torwoodlee.⁴² The large amount of land being feued in the later fifteenth and sixteenth centuries made this a common problem with status in Scotland.⁴³ The Pringles were occasionally jurors at local retours (inquests relative to inheritance), but do not appear to have held any substantial offices in the Borders or elsewhere. They were probably content to gather their rents and grow steadily wealthier from their feued lands, on which the lairds did not have an increasing rental to pay. For example the Pringles feued Caddonlee for £26 13s. 4d. *per annum*, yet by 1599 they were extracting £272 annually from their tenants there.⁴⁴ Despite this obvious profiteering, lesser lairds' daughters received proportionally smaller tochers than those of the greater lairds. Margaret Pringle, the sixth child of George Pringle received 500 merks when she married Oliver Edgar of West Monkrig in 1564 and her eldest brother, William, gained 500 merks from his marriage to Alison Heriot of Trabroun.⁴⁵ The Pringle lairds never borrowed very much money and they did not wadset their lands either. They do not even appear to have borrowed money to build Torwoodlee. Financial carefulness like this was relatively rare amongst Border lairds.

The Pringles of Torwoodlee left inventories of slightly above average value for lesser lairds. George (died 1568), had a total moveable estate of £1761 in 1576 with his debts only amounting to £71 and William (died 1577), left £2219 in 1579 with debts of £132. Agnes Pringle (died 1576), an unmarried daughter of George, left £352 2s. 5d. in 1581, which was estimated as a fifth part of her late father's estate. Finally Margaret, wife of George Pringle (died 1600), had a total of £6590 7s. 4d. in 1609, though this was for both herself and her husband who not only survived her but remarried twice.⁴⁶ Margaret did not live to see the new house at Torwoodlee completed in 1601. It is probable that this tower house was being built by George Pringle as a result of this marriage to Margaret, daughter of his neighbour Pringle of

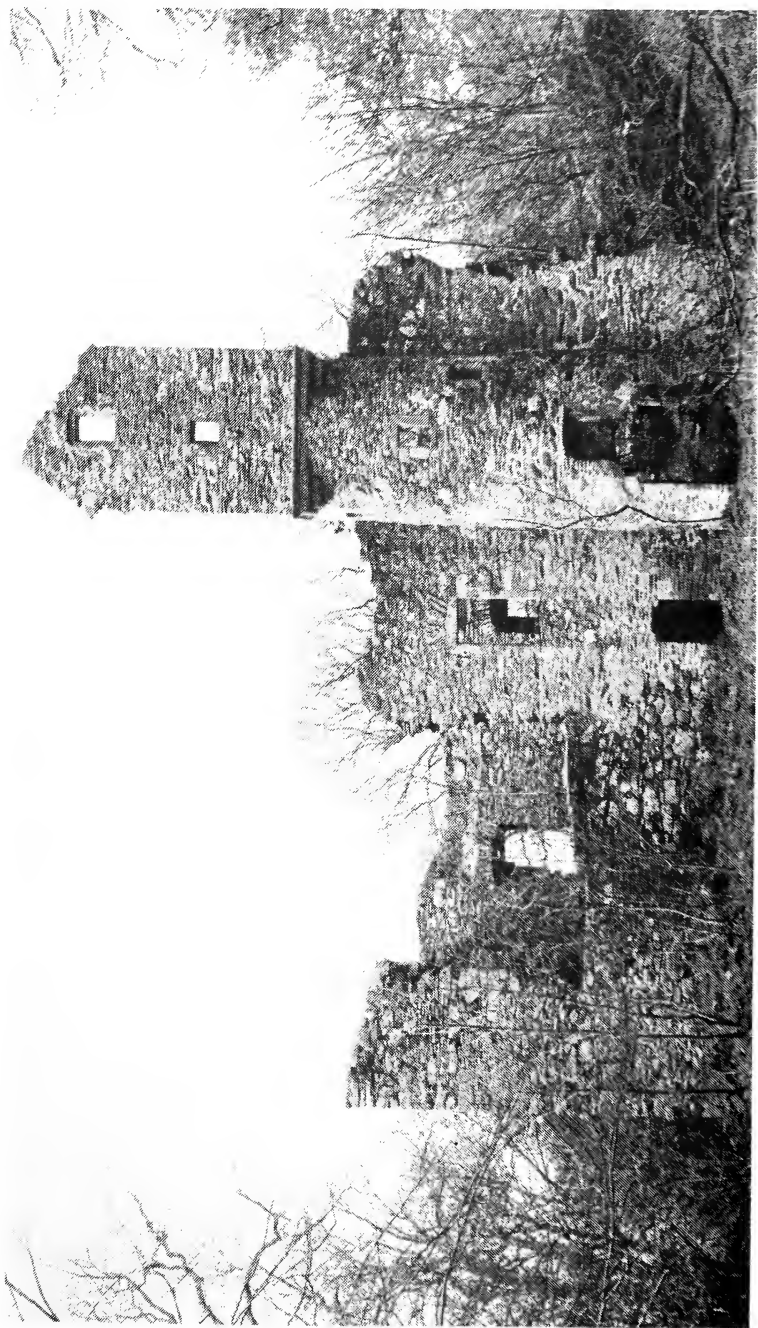


Plate 10. Torwoodlee Tower.

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Whytbank. Whytbank Tower had been built on nearby Knowes Hill by a series of terraces, so George probably would have wanted to build an equally impressive house on Mains Hill to the south-east of Whytbank. Torwoodlee was also constructed as a result of extensive terracing.⁴⁷ It was a two-storey house with large vaults, an orchard at the back and a courtyard, though it is very difficult to picture this today as so little of the building remains. It must have been a fairly commodious dwelling as the Pringles of Torwoodlee lived there until 1783, when they moved to a newly-built Georgian mansion at the foot of the hill. At present there is still a direct Pringle descendant of these sixteenth-century lairds at Torwoodlee.

Ferniehirst Castle, by way of contrast, is one of the most complete lairds' country houses of the sixteenth century to survive in the Borders. Its subsequent modernisations have been sympathetic to the original structure. As with Torwoodlee, the descendants of the original builders still own the property. Ferniehirst was built in 1490 and was rebuilt on several occasions during the sixteenth century by the Kers of Ferniehirst, ancestors of the Marquess of Lothian.

The Kers of Ferniehirst were greater lairds and kindred chiefs. They were powerful enough to be the equivalent of lesser nobility in Scotland, though they were not actually ennobled until 1622.⁴⁸ They intermarried at first with other greater lairds and latterly with noble families. As leaders of Border society they were accustomed to holding high offices such as warden or deputy-warden of the Middle March and they were the hereditary bailies of Jedforest.⁴⁹ They were all knighted and attended various parliaments, as well as the court. Many of the Kers' exploits are part of Scottish history, so it would be pointless to reiterate them. However, their finances and landholding are of interest.

The Kers held vast acres directly from the crown and from the earls of Angus. Like so many other sixteenth-century lairds they succeeded in gaining leases from monastic houses such as nearby Jedburgh and Kelso. Their landholding was centred on the Jedburgh area and this accounts for their power base in this region.⁵⁰ In the first half of the sixteenth century the Kers were extending their lands by purchase and gift. Andrew Ker bought some land and the patronage of Bedrule Kirk from the Rutherfords in 1524 and his heir, Sir John Ker, bought land in Lanton from the Turnbulls in 1525 and received lands in East Lothian as a gift in 1547.⁵¹ After Sir John's death in 1562, however, the Kers went through leaner times. His successor, Sir Thomas Ker, found himself seriously out of favour for supporting the cause of Mary, Queen of Scots in the 1570s. He was forfeited in

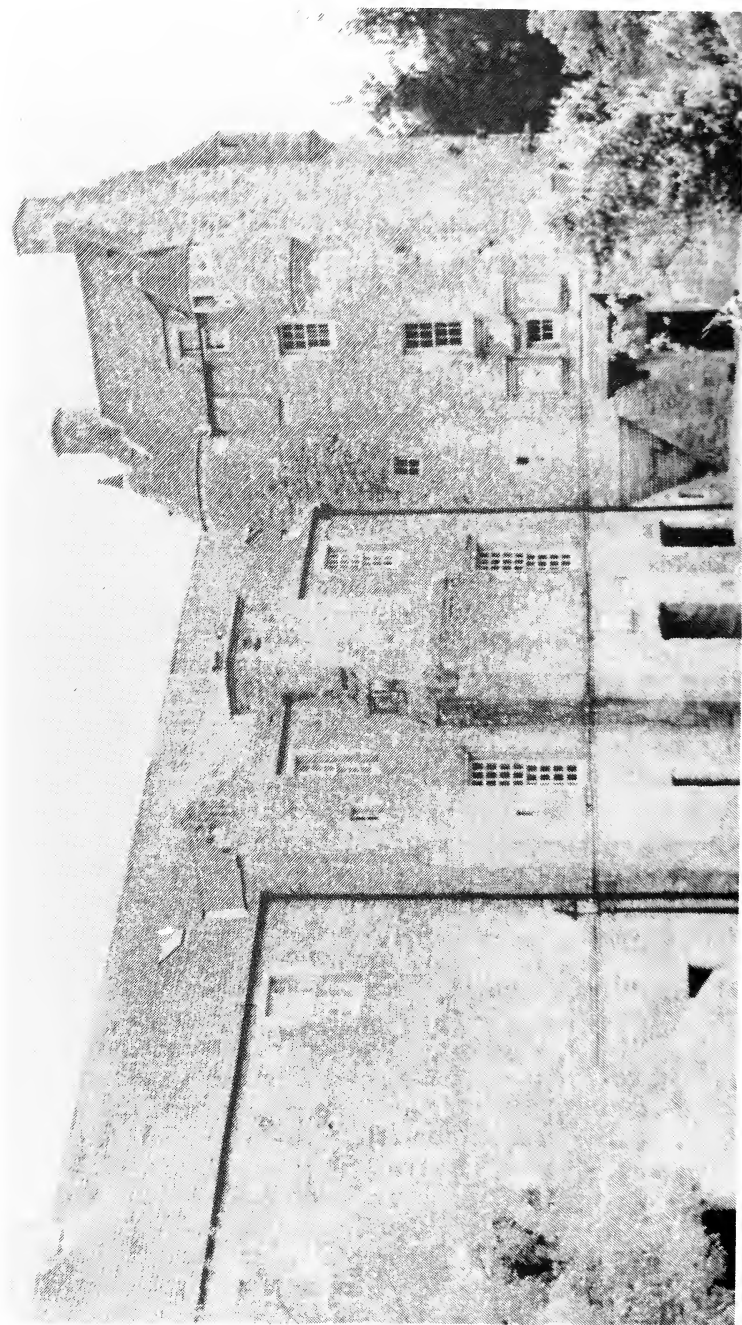


Plate 11. Ferniehurst, 1987.

1574 and forced into political exile until 1581 and again from 1582 to 1584, with obvious detriment to the Ker of Ferniehirst finances.⁵² He was forced to borrow money from many different people, who often went without any repayment from him. His aunt Isobel Ker of Cessford advanced him money on four occasions and he borrowed sterling from English Border friends as well as French francs from a sympathetic bishop in Paris. Sir Thomas could not wadset his lands to alleviate his debt until he was restored from forfeiture in 1581.⁵³ Fortunately his son Andrew had a better financial record, but he was never forfeited or forced into exile and probably received a substantial dowry from his wife, Anna Stewart of Ochiltree. Nevertheless, it would still take a while for the family fortunes to recover.

Ferniehirst Castle suffered along with its lairds for much of the century, though it was always rebuilt after trouble. It was one of the first lairds' houses to be reached when crossing the Scottish Border in the Middle marches and paid heavily for its strategic position in times of international conflict. The original castle was built in 1490, but it was destroyed by English forces in 1523 and was rebuilt only to be besieged again by French forces in 1549. This chequered building history continued with its destruction in 1570 by the earl of Surrey, who reported that 'we could not blow up Ferniehirst, but have torne ytt with laborars as ytt were as goode ley flatt'.⁵⁴ Ferniehirst was rebuilt yet again, but this house was demolished by James VI in 1593 as Andrew Ker had unfortunately sided with the ill-fated earl of Bothwell. The cellars survived this royal onslaught and became the foundation for the final rebuilding of the sixteenth century in 1598.⁵⁵ A plaque survives with the initials of SAK and DAS for Sir Andrew Ker and his wife Dame Anna Stewart and it is dated 1598. The original is now inside the house with a replica above the principal entrance, though it was outside in the 1880s when MacGibbon and Ross visited Ferniehirst.⁵⁶

Ferniehirst was altered in the seventeenth and nineteenth centuries and has been restored again in the 1980s, yet there is still a good sense of what the 1598 house looked like if you ignore the sash windows and the crow-stepped gable. The L-shaped structure is not untypical of other fortified houses in Scotland, but to build a country house on this scale so near to the Border confounds the image of the Border laird sitting in a squarely defensive tower, waiting for the next attack. Huttonhall similarly challenges this supposed preoccupation with Border violence. It would have been helpful if the house that Philip Rutherford of Edgerston built in 1596 had survived, as it was even nearer the Border than Ferniehirst, or even the towers built by Robert Ker

at Ancrum and Riddall of that ilk at Riddell in 1558 and 1567 respectively as they were probably larger than the average sixteenth-century Border tower house. Ancrum had forty feather beds in 1573 which clearly would not fitted into a square tower.⁵⁷

There is now enough evidence of building before the Union of the Crowns, other than the characteristic square-shaped tower, to refute the opinion that the Scots Borderers waited until after the Union to build substantial houses. Some of the post-1603 houses in the Borders have survived to give this impression, such as the Hirsell, Houndwood, Linthill, Old Mertoun, Nisbet or Wedderlie in Berwickshire. Cowdenknowes, Ferniehirst and Huttonhall, however, show lairds who were unafraid to display their wealth and status in new buildings. They were not alone in defying the unsettled nature of the pre-union Borderland as there were also lairds who adapted existing towers or monasteries rather than building anew, such as the Douglasses at Melrose, Haigs at Bemersyde, Lord Home at Coldingham and the Kers of Cessford at Holydean and Friars.⁵⁸

It is impossible to do justice to the rich architectural heritage of the Borders in one article, yet by looking at Cowdenknowes, Colmslie, Hillslap, Huttonhall, Torwoodlee and Ferniehirst some of the reasons for the increase in house building during the sixteenth century begin to emerge. Feuing was an important factor in the growth of the lairds' wealth, but so were the connections that the lairds made at court or within the Border administration. A combination of both of these elements led to the erection of grander country houses like Cowdenknowes, Huttonhall or Ferniehirst. However, it is fair to assume that the Pringles and Cairncrosses were content to live in their smaller houses as they also reflected achievement, if on a lesser scale. None of the lairds sampled were afraid to build in a frontier zone and the Kers' persistence in rebuilding Ferniehirst is really quite remarkable.

NOTES

1. This paper first took shape as a result of a Walter Mason Trust winter lecture (December 1990) and a lecture given to the 26th Annual Borders History Conference (November 1992). I am grateful to the organisers of both of these events.
2. M. M. Meikle, 'Lairds and Gentlemen: a study of the landed families of the Anglo-Scottish Borders, c. 1540-1603', University of Edinburgh Ph.D. Thesis (1989), pp. 28-40. Hereafter Meikle, thesis.
3. S(cottish) R(ecord) O(ffice), Register of the Acts and Decrees of the Lords of Council and Session, CS7/45 f.253. *Registrum Magni Sigilli Regum Scotorum* (hereafter RMS), ed. J.M. Thomson *et al.*, (Edinburgh 1882-1914), iv, 1624; v, 1390.
4. C. McKean, 'Castle-wise Country Houses', in D. Howard, ed., *The Architecture of Renaissance Scotland*, (Edinburgh 1990), pp. 17-18.

5. SRO Gifts and Deposits GD1/33/31, GD40/1/189/1, GD 40/1/202. National Register of Archives Scotland, 859/130/5. RMS, iv, 2346.
6. SRO Register of Deeds RD1/13 f. 359. *Registrum Secreti Sigilli Regum Scotorum* (hereafter RSS), ed. M. Livingston *et al.* (Edinburgh 1908-), v, 3041; vi 1042, 2816.
7. RMS iii, 1647, 1873; iv, 1194. RSS vi, 696.
8. *The Scots Peerage*, ed. J.B.Paul (Edinburgh 1904-14), iv, pp. 467-79.
9. Meikle, thesis, pp.502-03.
10. *Letters and Papers, Foreign and Domestic Henry VIII*, (Hereafter L & P, Hen VIII) ed. J.S. Brewer *et al.*, (London 1864-1932), xxi, part 1, 1279.
11. Royal Commission on Ancient and Historic Monuments of Scotland, (hereafter RCAHMS) *Inventory of the County of Berwick*, (Edinburgh 1915), pp. 68, 71-72.
12. *History of the Berwickshire Naturalists' Club*, (Hereafter HBNC), vol v (1868), pp. 268-69.
13. A merk was 13s. 4d.
14. All amounts are in pounds Scots unless otherwise indicated. The exchange rate of Scots pounds to sterling was £4 to £1 in 1560, falling to £12 to £1 by 1603.
15. SRO Edinburgh Commissary Courts: Testaments CC8/8/3 f. 405r. *Acts of the Parliaments of Scotland*, ed. T.Thomson and C. Innes (Edinburgh 1814-75), iii, pp. 404-04. RSS vi, 2381. *Accounts of the Lord High Treasurer of Scotland*, ed. T. Dickson and J.B. Paul (Edinburgh 1877-1916), xiii, p. 165.
16. SRO CC8/8/31 ff 381r-382v. RD1/36 f. 271.
17. J.C. Finnie, 'Note of Colmslie, Glendearg and Langshaw', HBNC vol xxxiv (1958), pp. 199-204.
18. Meikle, thesis, pp.470-71.
19. *Selections from the Records of the Regality of Melrose*, (Scottish History Society 1914-17), iii, pp. 151, 242, 352, 372.
20. SRO RD1/1 ff. 36b, 302b. Hartside was worth £42.13.4. p.a.
21. SRO CC8/8/3 ff. 405r-406r. CC8/823 ff. 236r-v. An additional £490 14s. 10d. was added to the first inventory in 1592. RD1/13 f. 136. RD1/14 ff. 197-99. RD1/16 f. 291. RD1/24/1 f. 304.
22. RCAHMS, *Inventory of Roxburghshire*, (Edinburgh 1956), pp. 292-94.
23. SRO GD150/1471.
24. SRO RD1/45 f.153b.
25. SRO CC8/8/26 ff. 179-81. RMS iii, 1111, 1354, 2416. RSS v, 3506.
26. SRO CH6/6/1/ ff. 29-30. RMS iii, 1302, 1481, 2011; iv, 2255; v, 1264-5.
27. SRO E48/1/1 f. 200. GD40/3/389/1 & 2.
28. SRO GD242/45. RMS v, 1962-3.
29. Meikle, thesis, p. 507.
30. SRO CC8/8/26 f. 181. RD1/48 ff. 199-201. RD1/50 f. 814.
31. SRO CC8/8/26 ff. 179r-181v.
32. SRO RD1/34 f. 398.
33. L&P, Hen VIII, xvii, 1197. *The Hamilton Papers*, ed., J.Bain (Edinburgh 1890-92), ii, pp. 465.
34. SRO CS7/42 ff. 59-60. RSS, v, 3506. MacGibbon, D & Ross, T, *The Castellated and Domestic Architecture of Scotland*, (Edinburgh 1887-92), iv, pp. 193-99. There are some inaccuracies about the family's history in MacGibbon and Ross.
35. *The Diary of Mr James Melvill, 1556-1601*, (Wodrow Society 1842), p. 219.
36. *The Burrell Collection*, ed., R. Marks *et al.*, (Glasgow 1988), p. 19.
37. SRO GD158/51.
38. MacGibbon and Ross, *op cit.*, iv, p. 194.
39. RCAHMS, *Berwick*, p. 98. Huttonhall was visited in 1908.
40. SRO CC8/8/6 ff. 291-93. RMS v, 1390.

41. Meikle, thesis, p. 671.
42. *The Exchequer Rolls of Scotland*, ed., J. Stuart *et al.*, (Edinburgh 1878-1908), xxii, pp. 705-07. *The Register of the Privy Council of Scotland*, (hereafter RPC) ed. J.H. Burton *et al.*, (Edinburgh 1877-), iv, p. 630.
43. Meikle, thesis, pp. 37-38.
44. SRO CC8/8/45 ff. 262r-63r. RMS v, 1390.
45. SRO RD1/7 f. 33 RD1/11 f. 373.
46. SRO CC8/8/3 ff. 475r-76r. CC8/8/10 ff. 21r-22r. CC8/8/6 ff. 291-92r. CC8/8/13 ff. 31v-32r. CC8/8/45 ff. 262r-263r.
47. RCAHMS, *Inventory of Selkirkshire*, (Edinburgh 1957), pp. 37-40.
48. M. M. Meikle, 'The Invisible Divide: the greater lairds and the nobility of Jacobean Scotland', *Scottish Historical Review*, xxviii (October 1992), 70-87.
49. Meikle, thesis, pp. 519-20.
50. SRO GD40/2/11/28 GD40/3/240. NRAS859/130/1. RMS iii, 249, 293, 577, 639, 2142, 2499; v, 734, 1488.
51. RMS iii, 293, 577. RSS iii, 2117.
52. RMS iv, 2344-47, 2369. Meikle, thesis, pp. 104-06, 109-113.
53. SRO CC8/8/16 f. 97. GD40/2/9/71 GD40/5/3/18 GD40/6/1/6. RD1/20/1/1 ff. 78, 81. Meikle, thesis, p. 258.
54. C. Sharp, *Memorials of the Rebellion*, (London 1840), p. 238.
55. RCAHMS, Roxburgh, pp. 218-221.
56. MacGibbon and Ross, *op cit*, ii , p. 161, fig. 620.
57. RPC ii, pp. 269-70.
58. RCAHMS, *Berwick and Roxburgh*. Meikle, thesis, pp. 261-62, 267-69, 451.

COAL MINES OF NORTH NORTHUMBERLAND I

BERWICKHILL COLLIERY

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Situation

The site of a mine entrance, on the upper slopes of Sunnyside, the prominent hill on the southern side of Tweedmouth, was marked on Rule's 1824 map of the Tweed estuary, slightly to the east of the Berwick-Belford turnpike road, just to the north of the entrance to Springhill Lane, or Priorhouse Road. By 1866, the 1st edition of the Ordnance Survey's 6 inches (to 1 mile) map recorded the entrance to the colliery to have migrated 0.7 mile south-west of the 1824 site. Figure 1, based on the Ordnance Survey information of 1866, clearly reveals the extent of the mining activities on Sunnyside and their extension southwards over the hill towards Heatherytops. This working is now usually known as Berwickhill though formerly it was called:¹

Tweedmouth & Spittle Colliery	1730
Tweedmouth Colliery	1745
Cooperie Colliery	1793
Berwick Town Hill Colliery	1822
Berwick Colliery	1840
Berwickhill Colliery	1866
Berwick Hill Colliery	1898

Individual pits within the colliery were the Rise Pit (1837), the Deep Pit (1837) and the Isabella Pit (1926 reference).² The eastern workings to Spittal were illustrated by a number of air shafts marked on the 2nd edition Ordnance Survey 6 inch sheet. It will be shown below that the Berwickhill ground was wrought over several centuries and it is, therefore, not surprising that the name changed many times over a long period.

Geological series

The Lower Carboniferous rocks of North Northumberland contain a coal series, the Scremerston Coal Group,³ that is well

Coal	Properties
Scremerston Main Coal	This, the leading seam — in extent, thickness and quality — of the series, was much sought. In the west of the district was sometimes known as the Blackhill Seam.
Stoney Coal	Mined in 1837 a short distance south of Berwickhill, at Scremerston. A strong burning coal, that left a white ash, suitable for steam-making purposes. Thought by some to be the equal of the Cooper Eye Coal, if not superior. Also called the Hardy Coal.
Cancer Coal	<p>This, the Berwickhill name for a seam of soft, dirty coal, that was known more generally as the Bulman Coal, except in the south of the district where it was the Main Coal (not to be confused with the Scremerston Main Coal, above).</p> <p>At Berwickhill the shale that formed the roof of this seam rendered it more difficult and more expensive to work than other seams, such as the Scremerston Main and Cooper Eye, both of which had a hard limestone roof. Consequently, it was not worked to any great extent at Tweedmouth.</p>
Three Quarter Coal	This poor seam, or series of seams with several bands of stone, was seldom worked.
Cooper Eye Coal	<p>Apart from the Scremerston Main Coal this was distinctly harder and cleaner than any other of the series. It varied a good deal in thickness, principally owing to the bandstone in the middle: this could be as little as 4 inches but, at its eastern extremity, as much as 5 feet 3 inches. The top coal of the seam could vary between 1ft 5in and 1ft 10in while the bottom coal could be 2ft but was often as little as 1ft 2in. Working west the coal was harder, firmer and stronger.</p> <p>Seam often referred to by miners as the Cowper Eye.</p>

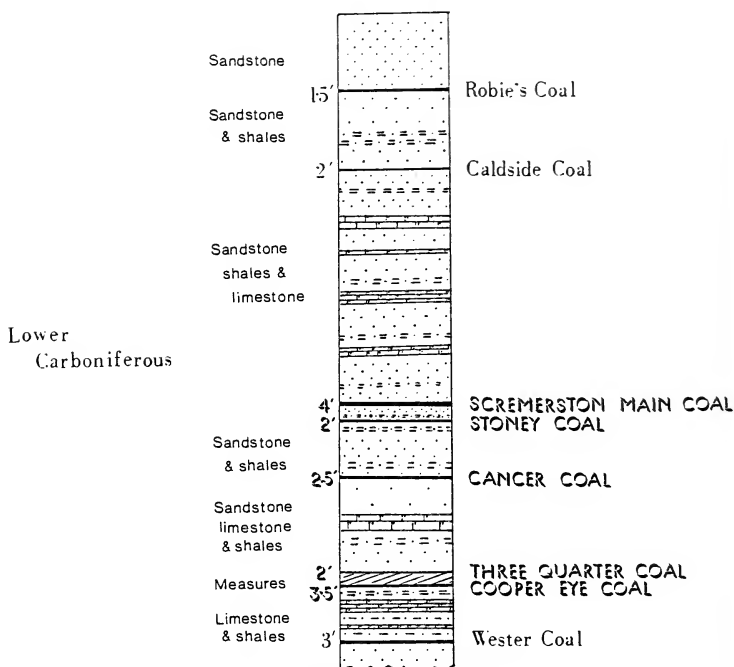


Figure 2. North Northumberland: Scremerston Coal Series.

Medieval

The antiquity of the Berwickhill workings is such that it is possible to view it in the earliest phases of coal mining in Britain. In medieval Europe wood had been utilised in most domestic and industrial heating. Nevertheless, wherever coal outcropped in Europe it had been usual to burn it in small quantities since the 12th century. But it was not until the second half of the 16th century that it came into widespread use in Britain as a substitute for wood. The earliest coal-burning economy was established first in England and then in Scotland between about 1550 and 1700. The transition from woodcutting to coal mining, to provide the main source of heat, was part of an early British economic revolution. The adoption of coal changed the economic history of Britain and led to the Industrial Revolution which gained momentum in the final two decades of the 18th century.⁵

There had been little incentive before the mid-16th century to dig deep into the ground to discover the new dirty fuel as long as wood was available. But as supplies of wood rapidly diminished, and a shortage of shipbuilding timber appeared to threaten Britain's very existence, the nation turned to coal.⁶

Sea coal is known to have been used at Berwick Castle, to burn in the wine cellars, in the excessive cold of February 1303.⁷ This could have been coal washed up by the sea on a mid-Northumbrian beach but was more likely to have been coal transported by sea from the Forth or the Tyne. Obviously, it was not local from across the Tweed. The earliest known reference to the winning of coal in Tweedmouth relates to mining at the close of the Middle Ages. This was a lease made on the "1st September in the vii yere of the reigne of Kyng Herry VII" (1491).⁸ Then, as already noted in an earlier paper,⁹ Raine provided evidence of coal being produced at "Twedmothe colpyt" in 1510 for work on Norham castle. The same writer provided two further examples¹⁰ of coal being bought from the same source in 1511-1512:

From 24 Sept . . . Bought this week, at Twedmothe colpyt, 16 chaldre¹¹ cols, 16d. per chald., coroag ev' chaldre 2s. 8d.

From 14 April . . . Paid this week for 3 chaldr of cols, which was caroad to the smythys from Twedmothe, Scremerstone, and Furd, 16d. per chald., carriage 2s. 8d. per ch.

It will be observed that the charge for carting the coal, the five miles from Tweedmouth to Norham, was twice the cost of the coal.

The Tweedmouth colliery was productive in the early 16th century, at the start of the coal-burning era, and in 1520 Thomas Strangways, Master Porter of Berwick, and W. Gardiner were the lessees of the coal mines of Tweedmouth. They also had "a license to build two salt pans there".¹² Forty years later, the 1560 Survey of Norham and Islandshire mentioned a coal mine between the land of Tweedmouth and "le Spittle".¹³ While this pit and its neighbours may have produced enough fuel for Norham's building needs these local workings were unable to meet the massive fuel requirements of those supplying the lime to the builders of Berwick's Elizabethan fortifications. In the 1560s coal was brought from Newcastle upon Tyne for lime burning.¹⁴ The local supply in the mid-16th century was inadequate.

17th century

In 1611, on the death of George Home, earl of Dunbar, the division of his estates saw the manor of Tweedmouth and Spittal pass to the earl of Suffolk, who was married to Elizabeth, a daughter of Home. The manor was then sold on the 6th May 1657¹⁵ to the Corporation of Berwick for £570. The Tweedmouth colliery was included in this sale.

On the 1st July 1687 the Corporation of Berwick granted to

Captain Phillip Bickerstaff, of Chirton in Northumberland, the right to work the "Coal Mines Coal Pitts Seams of Coal and Coals now found and to be found Opened or Proposed Within the Town fields Bounds Liberties Precincts . . . of Tweedmouth or Spittle". This lease for Berwickhill was, as indicated in Table 1, for 31 years at a rent of five pounds ten shillings yearly. The lessee was also given the liberty to build two salt pans and this would appear to have been a relic of earlier times. Further clauses insisted that

Lease commenced	Principal lessee, tenant or occupier	Length of lease	Annual rent
1 July 1687	Philip Bickerstaff of Chirton	31 years	£5. 10. 0
29 Nov 1717	Samuel Stanton	9 years	£60 10. 0
5 Feb 1730	George Lovett of Berwick, Burgess	7 years	£11. 2. 6
5 Feb 1737			£100. 5. 0
15 Jan 1741	William Davison of Berwick, Burgess		£47. 2. 6
1748	Joseph Forster, Gentleman Burgess		£20. 0. 0
20 April 1758	Fenwick Stow	21 years	£100. 0. 0
1 Sept 1759	Thomas Rutherford the Elder, Merchant Burgess		£45. 0. 0
7 April 1780	Anthony Lambert of Tweedmouth, Gentleman		
1 July 1793		8 years	£100. 0. 0
4 Sept 1801	John Smith of Tweedmouth, Farmer	21 years	£71. 0. 0
4 Sept 1822	Robert McAdam of Spittal, Quarryman		£265. 0. 0
28 Dec 1829	John Paxton of Berwick, Linen Draper	14 years	
1836	Ralph Brody		£100. 0. 0
4 Sept 1853	Patience Johnson of Scremerston Sea Houses, Widow	21 years	£172.10.0
16 Dec 1874	George Carr of Greenlawalls, Gentleman		1st 3 yrs: £100 p.a. 4th yr: £120 Remaining yrs: £172 p.a.
3 Sept 1895	Scremerston & Shoreswood Coal Co. Ltd		£120. 0. 0
3 Nov 1916	Scremerston Coal Co.		£120. 0. 0 Post-1932: £5

Table 1: Berwickhill Colliery: leases, 1687-1916 (After BRO F20/2 & D1/8)

coals must not fall into the river and ships entering the port, to load coal, would unload their ballast only at the Ballast Quay.¹⁶

18th century

A glimpse of the track running down Sunnyside, the hillside on which mining was proceeding, was provided by a traveller¹⁷ going north in 1704:

Just above the River Tweed comeing towards Berwick, there is so steep a hill I could hardly gett down it, and just under this hill, by the riverside, are many houses inhabited by people that seem to be very poor; and almost at every door is fish hanging out.

The surface of this track, that was the Great North Road and yet to become the Berwick to Belford turnpike, would suffer from the carts going to and from the landsale colliery of Berwickhill.

Towards the expiration of a lease steps were quickly taken by the Corporation to re-let the colliery. In 1717 what was to become the standard procedure was followed, when, at meetings of the Guild of Freeman it was ordered¹⁸ that the:

15 March	Four members nominated, enquire into the Town's colliery and report.
15 November	Bailiff of Tweedmouth repossess the colliery.
18 November	Colliery be relet for a term of 21 years . . . to serve the townspeople . . . not to employ above 15 hewers at a time.
29 November	Colliery to be let to Samuel Stanton for a term of 9 years . . . rent of £60. 10s. per annum.

By 1724 the mine, according to the lessees, was unprofitable and at a Head Guild, on the 9th October, Samuel Stanton prayed "an Abatement of the Rent or Some other Relief in Consideration of his Losses". If granted, the burgesses were told, it would give "Relief for the Benefit of the poor who are likely to be under Great Difficulties for want of Coals".¹⁹ This was followed, a week later, by a proposal seeking an abatement of £55. 16s. of the rent from 29th November 1724. The proposal²⁰ was that the lessee would:

Re-open the colliery immediately and in 14 days provide the inhabitants of Berwick with 360 bolls of Great and Small Coals weekly according to the measure and price stipulated in the 1717 lease.²¹ All the coals over and above the 360 bolls weekly would be sold to

Lease	Under Tenants
1687	
1717	John Pratt
1730	John Burrell of Berwick, Burgess John Rutherford of Berwick Thomas Gibson of Tweedmouth
1737	Nicholas Whitehead, Robert Richardson, John Rutherford of Berwick, Gentleman Thomas Gibson of Tweedmouth, Gentleman Stephen Ridpath of Spittle, Yeoman
1741	Alexander Farguyson, Burgess Thomas Scott of Berwick, Burgess William Armoror the Younger of Berwick, Gentleman
1748	George Forster, Gentleman Burgess
1758	
1759	William Hall of Berwick, Merchant Burgess
1780	Anthony Lambert the Younger of Berwick, Gentleman John Knowles of Berwick, Saddler Burgess
1793	William Lambert of Tweedmouth, Gentleman John Knowles of Berwick, Saddler Burgess
1801	James Thompson of Shoreswood, Gentleman Anthony Forster of Berwick, Merchant Burgess Thomas Gilchrist of Berwick, Cooper Burgess
1822	George Redpath of Berwick, Mason George Marshall of Berwick, Druggist John Paxton of Berwick, Linen Draper
1829	Ralph Brody, John Rennison, Richard Reavely
1836	John Paxton, John Rennison, Richard Reavely
1853	John Carr of Roseworth, nr Newcastle, Coal Owner William Carr of St Mary at Hill, London, Coal Factor Charles Carr of Seghill, Colliery Viewer James Sinclair of Berwick, Jurisprudence Broker James Wilson of Springhill
1874	Charles Carr of Waterhead, nr Ambleside, Colliery Viewer Thomas Johnson of Sea House, Scremerston, Colliery Owner John Carr of Roseworth, Merchant William Carr of Tunbridge, Gentleman

Table 2: Berwickhill Colliery: under tenants (After BRO F20/2 & D1/8)

local inhabitants before any others, by the measure and at the prices agreed.

Immediately begin to sink for the Main Coal, win this before May 1725, work the coal for the remainder of the term and furnish the local inhabitants with it.

Provide, for the inhabitants, 'the benefit of Two Hooks at the Pitt till they be served'.²²

Be allowed a new lease at the end of the old one, to work the Main Coal during the whole term and supply the local people.

Have sufficient security, available to the Corporation, and, if the above conditions were not met there would be no abatement of rent.

The Guild agreed to the proposal and ordered that Mr Mayor and the bailiffs would take security from Samuel Stanton and John Pratt. But the abatement was only being sanctioned to benefit the poor of the town who, at that time, were obliged to pay "a high and unsupportable price for Coals at the Neighbouring Collieries".²³

Stanton and Pratt were involved in the 1720s in two boundary disputes. The first, in 1723, was with the tenants of East Ord Colliery. The difference was raised at a General Guild, of the 8th October, when it was reported that the neighbouring tenants were working below the Tweedmouth boundary and they were attempting to prevent the Corporation's tenants from sinking a pit which appeared to be within the Berwickhill ground. The freemen were told of the second dispute on the 21st October 1726: a bill, exhibited in the Court of Chancery, had been made on behalf of the heir of the Earl of Derwentwater by Sir John Webb, for an encroachment in working coals upon the grounds of the manor of Scremerston by the Berwick tenants. At a General Guild on the 19th January 1727 it was revealed that Webb was acting on behalf of John Radcliffe, an infant. The bill of complaint had been perused and settled by Edward Cook, Berwick's Recorder.²⁴

Predictably, Stanton and Pratt were not awarded a new lease in 1730, as they had proposed to the Guild in 1724. The lease of 1730 stipulated that the conditions formerly enjoyed by Captain Bickerstaff, the 1687 lessee, would continue. But the new lessee had to "Leave Sufficient and Substantial pillars of coal in the Severall pits . . . for the Support of the ground". The Corporation also claimed the right to enter the colliery and to report on whether it was being regularly and fairly worked. A restriction on the amount of coal wrought was again written into the lease with no more than 15 hewers to be employed at any one time. Restrictions on the selling price of coal were also set: two tubs of fire coals had not to exceed two pence and the same amount

of great coals should not exceed six pence. The tubs, as the specifications indicated, were small: fourteen inches deep, one and twenty inches diameter at the top and twenty-two inches diameter at the bottom. These were to be, "Sufficiently and duely filled as was formerly" and the local inhabitants would at all times be preferred and served with coals before anyone else.²⁵

The 1730s may have witnessed an improved period of mining at Berwickhill and when the 1730 lease expired the new one, again for seven years, represented a nine-fold increase in rental. Three of the 1730 lessees continued in 1737 with two newcomers. Another indication of increased activity was when the maximum number of hewers allowed in 1737 rose to 20. The other clauses in the new lease²⁶ remained as they had been in 1730. Whether the 1737 lease was unrealistic economically is uncertain but it did not run its full term and new bidders won a fresh contract in 1741. In this the annual rent was more than halved and the number of hewers returned to the former total of 15. The remaining 1737 covenants were included in the 1741 lease²⁷ and at the approach of the mid-century (1748) the clauses in a newly agreed contract were similar to the previous one.²⁸ The Town Book for 1745-1746 listed the income from Berwickhill and other Corporation properties, as a sample²⁹ illustrated:

		£ s d
Grand Farm and Ballast Key	Major Pratt & John Ord apptd by Order of Guild to collect it	311 7 5
New Mill	David Miller	73 0 0
Tweedmouth Colliery	Mr William Armorer	47 2 6
New Lime Kiln	Alex. Ferguson	1 10 0
Engine House	William Thompson	6 10 0

The annual rent had been paid in 1745-1746 by one of the under tenants and not by the principal, William Davison.

The differences in the 1758 lease, compared to the previous one, were a longer letting period, an increased rent and a stipulation that the Berwickhill lessee was not allowed to work "Scremerston, Cheswick, Unthank, Morton, Thornton or Shoreswood Collieries, all in the County of Durham aforesaid, or any part or Share of them".³⁰ Whether this condition disqualified the new lessee, Fenwick Stow, from working the Tweedmouth Colliery has not been established but in Part II of this study it will be shown

that he was a lessee of Unthank Colliery in 1767. The next lease, of 1759, emphasised the short duration of that of 1758. The new one was again for 21 years but the annual rent had fallen to £45 and the number of hewers continued at fifteen.³¹ Table 1 presents the fluctuations in rents throughout the 18th century that point to the varying, and at times unrealistic, values placed on the workings by different bidders. The 1780 letting conditions³² were on the whole identical to those of 1759 and although the lessees were led by Anthony Lambert, of Tweedmouth, one of the co-lessees was John Knowles, a Berwick burgess saddler. The inclusion of the latter represented a Guild presence in the management of the colliery that existed throughout the century.

The 1780 lease did not, however, run its full term. On the 15th February 1793, at a meeting of Head Guild, a motion was put that notice be served on the tenants to quit Berwickhill Colliery in six months, for breach of their agreement.³³ Three days later, the Guild appointed a committee "to enquire into the State of the Corporations Colliery to see how far the Tenant has complied with the Covenants and to employ such Viewers . . . for that purpose".³⁴ On the 26th February Anthony Lambert admitted to the committee that he had sold small coals at 3d. per boll, instead of the agreed 2d. But, on the 21st May 1789, when the price was reduced to the stipulated 2d. per boll his losses increased dramatically:

Colliery losses	£	s	d
1789	57	10	10
1790	143	4	1
1791	105	3	0½
1792	68	10	2¾
Total	374	8	2¼

The losses were largely due, Lambert argued, to having worked the Cooper Eye seam. In the interim, the commissioners and governors of Greenwich Hospital, to whom the Scremerston estate had passed, had given leave for an outstroke through the boundary or barrier of Scremerston Colliery. This privilege would cost the Berwickhill tenant an additional £25 per annum and five pence a ton when the output exceeded a certain amount. But the outstroke would, Lambert promised the Guild, enable him to raise a greater quantity of coals from the Main Seam than had been drawn from Berwickhill in any year in the previous four. It was

estimated that the new outstroke would last for three years or more.

Nor was Anthony Lambert conscious of having managed the Corporation's colliery in an improper manner. The pit had not been worked to the extent that he was entitled or had intended, had the "Main seam been eased of water". And yet, the mine had been worked to a considerable degree during the previous four years and in the two years prior to when the Main Seam was drained. In the two years, 1787 and 1788, a greater quantity of coal had been wrought than in the succeeding years. If allowed to work the Main Seam he would raise more coal than previously, to supply the town.³⁵ The viewers' report of the 9th March 1793³⁶ declared that "your Tennant hath not wrought your Colliery fair". The three who signed it, Thomas Paxton, Stephen Thompson and Thomas Bickerton, appear not to have been freemen and from the nature of the report would seem to have been pitmen, possibly retired, who had been commissioned as viewers, in accord with the Guild order of 18th February 1793. Lambert responded to the report on the 26th March. Although the viewers had contended that the Cooper Eye Coal had not been "fair wrought" they had failed to point to any injury the colliery had suffered at his hands. The proposals that he had already made would allow his pitmen to work the colliery with greater ease.³⁷ Lambert won the day when, on the 12th April 1793, the committee, appointed to enquire into the state of Berwickhill, informed a Head Guild that, in its opinion, the colliery should remain in the sitting tenant's hands, provided it was worked in the manner that he had proposed. The Guild agreed.³⁸ When Anthony Lambert and John Knowles were granted an eight years lease on the 1st July 1793 a new clause allowed them to make whatever watercourses were necessary in their bid to provide the district with a steady and adequate supply of coal.³⁹ Wet seams continued to be one of the greatest mining problems encountered in north Northumberland.

19th century

Towards the end of Anthony Lambert's tenancy of their colliery the Guild decided to have the property surveyed and on the 8th May 1801 John Steavenson,⁴⁰ of Newcastle, was told of the need to find a colliery viewer. Three days later Steavenson replied to the Mayor, David Logan, that he had met John Buddle, manager of Walker Colliery, and that he had promised to send a viewer to Berwick within a few days. "The fee for such a Business is Ten Guineas and his expences".⁴¹ Buddle, the foremost mining engineer and viewer of the period,⁴² wrote to the Mayor, on

12th May, telling him that he could not accept the assignment but would send someone "to do whatever is necessary".⁴³ The viewer sent north was a Mr Ramsay and his report provided a rare insight into Berwickhill at the start of the 19th century:

Survey 1

To David Logan, Mayor, & the Corporation of Berwick upon Tweed			
Viewer: Mr Ramsay			
i	The working seam, at a depth of 15 fathoms, has a section of:		
		Ft	In
	Coal	1	4
	Gray post stone	3	8
	Coal	0	10
	Soft blue metal	0	4
	Total	6	2 of coal and stone
ii	Present mode of working is by hewing out the soft blue metal, which enables the hewer to take down the coal immediately above, then the stone and lastly the 1ft 4in of coal. The stone is stowed underground and none of the coal is lost.		
iii	The water-level seems pretty well secured, and, if no dykes, troubles or contrary strick or inclination of the seam takes place, coal, for at least another term of 21 years may be obtained.		
iv	Only four hewers are now employed, whose work averages about 100 tubs per day. These tubs are only 9½ inches in depth, although allowed by the lease to be 14 inches, the diameter within being the same.		
Observations			
<p>On considering the small proportion of coal yielded by this seam, the great expense of taking down and storing the stone underground; and the trifling quantity at present wrought and vended, with other concomitant circumstances, it appears that no considerable emolument can now arise to the lessee from such reduced workings. Perhaps the holding of this colliery, by the present parties, and under such an insignificant sale, may be subservient to the purpose of monopoly, as to other collieries held by them in the vicinity of Berwick.</p> <p>If the information is well founded, that a great increase of quantity, more than now wrought, could be sold from this colliery, I would recommend, in order to make the most of it, that the pit should be advertised to be let by proposal, when undertakers would come forward. I have no doubt but — by the mode of public competition — the Corporation will obtain a considerable advance of rent and the neighbourhood benefit from a more plentiful and cheaper supply of coal than (the times considered) they have hitherto had.</p>			
John Buddle Newcastle 22nd May 1801			

Undertakers did come forward and the highest bid, of £71 per annum, was made by John Smith, a Tweedmouth farmer. The main covenants of the first lease of the 19th century required the tenants to:⁴⁴

Pay the annual rent in two instalments, on the 4th September and 4th March each year.

Pay all taxes except the land tax.

Agree not to sublet the colliery without leave from the Guild.

Work the colliery in a due and regular manner and leave sufficient and substantial pillars of coal or stone to support the roof of the workings.

Permit such persons as the Corporation shall appoint to descend into the colliery to view, inspect and survey the workings.

Set to work in the colliery at least four hewers and not more than 15.

Sell the coal which shall be wrought: two tubs of such coal at a price not exceeding four pence — each of which tubs to contain, while working the Cooper Eye seam, 12 gallons, and, while working the Main seam, 14 gallons, which tubs shall be duly and sufficiently filled.

Agree not to be concerned in any other colliery within 20 miles of Berwick.

Surrender and yield up the colliery and coal at the end of the term as a going and working colliery, provided the seams continue to be workable.

Pay the proprietors and tenants of the lands adjacent to the colliery such sums as shall be adjudged 'acquivalent' to the damages as shall happen to the lands by the colliery workings and to indemnify the Corporation therefrom.

Be allowed within six months after the expiration of the term to remove all the tubs, utensils and coal as shall be lying in bank at the colliery.

Be allowed to burn part of the coals, wrought in the colliery, into cinders on the colliery ground.

A proviso also ensured that if the workings were carried out in an unworkmanlike and unfair manner it would be lawful for the Corporation to stop the working of the colliery until the complaint had been settled by "two indifferent persons", one to be chosen by each party, and in the event of a disagreement, by an umpire.⁴⁵ The actual lease of 1801 also allowed the tenants to erect "fire engines and other engines", thus suggesting that a pumping or winding engine had been or was about to be erected on the colliery site. The lease also contained penalties to be paid when the covenants were contravened.⁴⁶

In 1803 the tenants of Berwickhill wrote⁴⁷ to William Willoby, Town Clerk:

Sir

The late Tenants Tub being mentioned at the time of the letting the Berwick Colliery which Tub Contains 12 gallons Ale measure and is sold for two pence, Two of which make a Boll or 24 Gallons, and which Tub is not only the Tub used by the late Tenants but as we understand (from Old Colliers who have worked this Colliery) has been always used there when working the Cooper Eye Seam being the Seam wrought at present and for this long time past at the Corporation Colliery and is also the measure used at all the other Collierys in this Neighbourhood, Except at the Unthank and Scremerston Collierys — where the Boll Contains 28 Gallons but these Collierys are Working the Seam Called the Main Coal and when this Seam was Wrought at the Berwick Colliery it has always been the Custom to Inlarge the Tub to 14 Gallons two of which make a boll of 28 Gallons. The Reason for Which is that in Working this Seam there is a greater quantity of Dead Small and the Colliers are inabled to turn out Double the Quantity of Coal these two different measures are Universally known in this Neighbourhood and the Colliers when hired always understand that if they work the Cooper Eye Seam they are to Turn out 12 Gallons to the Tub. But if they Work the Main Coal Seam they must then give 14 Gallons to the Tub and we have no doubt that not only ourselves but every one who bid for the Colliery understood the Tub above described was the Tub by which they were to Sell. It is also better understood when the Tub is described by the quantity which it is to hold than when the dimensions thereof is Setforth besides it is not possible from the Nature of the Workings to be fixed to the Same form of a Tub but there is no difficulty if fixed only to the quantity it is to hold for what ever form it may be necessary to make it of. It may Always be made to hold the quantity we Covenant to deliver — You will please lay it before the Committee and Hope they Will approve of the above two different measures being put in to the Berwick Colliery Lease in place of the dimensions as being the measure generally understood at time of letting and Universally Used at this day at every other Colliery in the Neighbourhood.

We are Sir

Your very Obed.^t Serv.^t

John Smith

James Thompson

Tweedmouth

3rd March 1803

The request from the colliery tenants would appear to be exactly what the conditions of letting, above, allowed. But when Smith and Thompson petitioned the Guild on the 20th June 1803 it seemed that the tub, which they had inherited at the colliery,

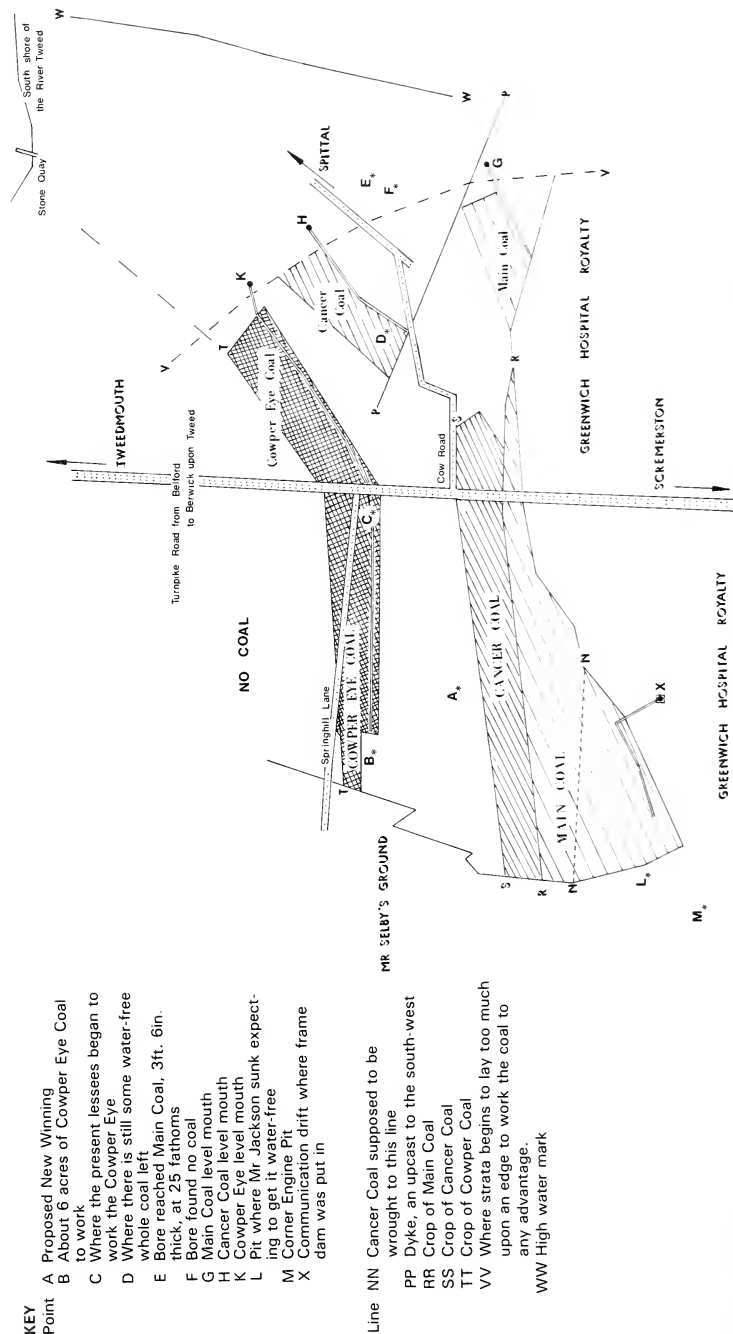


Figure 3: John Henderson's plan of Berwickhill Colliery, May 1822 (After Berwick Record Office, U3/9)

was one of 18 gallons.⁴⁸ This was quickly resolved four days later at a General Guild when it was ordered⁴⁹ that the tenants:

. . . be allowed to sell the Coals in a Tub containing Twelve Gallons while working the main Seam instead of the Tubs specified in the Conditions of letting.

In April and May 1822 the Guild took steps to appoint experienced workmen to view the colliery as the lease was about to expire.⁵⁰ Then, on the 3rd June, the report of John Henderson, the viewer appointed, was read in Guild. This report offered a second unique insight into the colliery in the first half of the 19th century. The main points⁵¹ were:

Survey II

To Thomas J Steel, Mayor, & the Corporation of Berwick upon Tweed	
Viewer: J Henderson	
i	The Cowper Eye Seam, the only one at present open to inspection, has been wrought in a fair workmanlike manner.
ii	Working has been in accord with that in the same seam in neighbouring collieries.
iii	The water level, as far as could be examined, had been left in good order.
iv	In the present pit the stone that divides the coal is not so thick as further east.
v	Present pit, to the Cowper Eye Seam, about 15 fathoms deep.
vi	Present working part of the colliery is not far from the Berwick to Etal turnpike road.
vii	The best place for a New Winning would be at mark A (on the map, Figure 3); this would be 26 fathoms deep.
viii	A small engine could be erected to pump the water 14 fathoms to the present level. Or, a drift could be driven or the water pumped to the surface.
ix	The engine, above, might be made to draw coal to bank.
x	The New Winning would open up a considerable tract of dry coal in the Cowper Eye Seam.
xi	At Mark B, on the plan, there remains about 6 acres of Cowper Eye coal to work: the present rate of working of 8 hewers would produce 26 bolls (of 24 gallons each) Great and 4 bolls of Small each, to the darg, or day's work, and calculating 300 working days in the year, it will last about 3 years, which would allow the incoming tenant to make the necessary preparations for a New Winning.
xii	Mark C on the plan is where the present lessees began to work the Cowper Eye. About 19 acres excavated. But they probably wrought some of the Cancer Coal in the early part of their term.
xiii	At mark D there is still some water-free whole coal in the Cancer Seam.

xiv	There is some Main Coal to the east but, with such strong competition from neighbouring collieries, its exploitation is doubtful.
xv	At mark E a bore reached the Main Coal, 3ft 6in thick, at 25 fathoms.
xvi	Advertise the new letting in the Newcastle papers to induce individuals unconnected with the neighbouring collieries to come forward.
xvii	If taken by any parties concerned in collieries in immediate neighbourhood it would be for the sole purpose of a monopoly.
xviii	Let the colliery by proposals, in writing, prior to the expiration of the present lease.
xix	The situation of the colliery, in its proximity to Berwick, is very favourable.
xx	Its great drawback is the thickness of the stone between the two pieces of coal that constitutes the Cowper Eye Seam.
xxi	The great expense of taking down the intervening stone and stowing it, relative to the small proportion of coal produced, diminishes any prospect of gaining a great increase in rent.
xxii	Best mode of letting: lessee pays annual rent for a certain quantity of coals — say 100 tens, ⁵² which is about the amount eight men will produce in a year. Rent: about £100. All coals wrought over and above this quantity to be sold at rate of 20s. per ten.
xxiii	Portion of small coals to be deducted for use by pumping engine, as is customary.
xxiv	The lessee to be covenanted to send you a regular account every quarter of the coal wrought and brought to bank, making no deductions for workmen, fire coals, masters' fires, doctors' fires or others, as is the custom in some places.
xxv	In the Cowper Eye Seam there remains yet to work about 280 acres.
<p>Explanation of measures</p> <p>The ten of coal alluded to above (xxii) consists of 418 Newcastle bolls of 36 gallons each — as used in the letting of Newcastle collieries.</p> <p>The ten will produce about 627 twenty-four gallon bolls, the customary measure in this neighbourhood and 100 tens will contain 62,700 twenty-four gallon bolls.</p>	
<p>23 May 1822</p> <p style="text-align: right;">John Henderson Berwick</p>	

The Guild then ordered⁵³ that the colliery be let by proposal, that the Committee of Inspection receive bids and the measure to be used should be 2 tubs, each containing 12 gallons, making 24 gallons to the boll,⁵⁴ the price of the boll would not be stipulated, nor would the taker be confined only to the Corporation's colliery. The Committee of Inspection received six bids:⁵⁵

Undertakers	Bids
Thomas Spowart, James Gladson & Co.	£135
Alexander Rea, Doddington Colliery	£135
Robert Johnson, Scremerston Mill House	£180
John Beveridge	£329
James Thompson & John Thompson	£75
Robert McAdam of Spittle, Quarryman George Redpath of Berwick, Mason George Marshall of Berwick, Druggist John Paxton of Berwick, Linen Draper	£265

Robert Johnson added a postscript to his bid indicating that he would be willing to pay an increased rent if permitted to employ more than 15 hewers and that he be allowed to "quit and give up" the colliery at the end of the fifth, tenth or fifteenth years. His bid was unsuccessful. On the 4th July 1822 it was announced at a General Guild that the colliery had been demised to Robert McAdam. John Beveridge had, as indicated, been the highest bidder but had been unable to find sureties.⁵⁶

It took Robert McAdam less than a year to realise that the problems of working Berwickhill were formidable. This was reflected in the petition that he presented to a Guild of 11th August 1823.⁵⁷ He had gone to considerable expense and used every possible endeavour to improve the colliery. But it was impossible to give a rent higher than £150 per annum, unless for the purpose of monopoly. McAdam, aware that some might think the request too great, was yet willing to pay double the amount offered by the late tenant, James Thompson, and £50 above the value fixed by Mr Henderson. He trusted that the freemen would not consider him unreasonable but would listen to and comply with his request. If the guild agreed to a rent of £100 a year it would allow a new winning to be made by "bringing up a level or putting on an engine; which would make her a current going colliery for at least forty or fifty years . . . without any additional expense to the Corporation . . . and the colliery would be at the expiration of the present lease worth more than double . . . that she is . . .". The lessee further agreed that the cost of coals to the burgesses and their families would never exceed four pence half penny per boll which, with the better measure given, would

be equivalent to a reduction in price of at least 2s. per cart. McAdam also intended to open a coal yard in town, for the sale of coals. Burgesses and the widows of burgesses would then be able to purchase a hundredweight or even half a hundredweight at the same rate as cart loads. He urged the Guild to consider the case.

On the 12th September 1823, after McAdam's petition had been considered, the Guild ordered that an abatement of £165 a year be granted, from the commencement and during the remainder of his lease. A condition was that he furnished good and sufficient coals for freemen and the widows of freemen. McAdam also had to find security for the performance of the agreement.⁵⁸ The Guild seem to have been surprisingly accommodating to McAdam.

A view⁵⁹ of Berwickhill in the time of Robert McAdam is available . . . "On Sunnysidehill, about half a mile south-east of Spittal is a large colliery belonging to the Corporation of Berwick. The summit of this hill commands a beautiful and extensive prospect in every direction; it was formerly a barren moor, but has recently been cultivated, and now produces rich and abundant crops".

Once the Municipal Corporations Reform Act of 1835 became law the control of local government passed from the freemen to the locally elected council. Thus, the colliery and certain of the other properties, formerly managed by the Guild, became the responsibility of the town council, even though the freemen still remained the lessors of Berwickhill.⁶⁰ The colliery had, as Table 1 reveals, been re-let in 1836 and before the end of the year the four tenants had informed the Council of the losses sustained from restrictions of the lease. The two major handicaps were being limited to 15 hewers and having to supply the freemen, their widows and families with coal at a price "far below remuneration". The second of these restrictions had not been included in the earlier leases or even those of the 18th century. It appears to have become a letting condition in 1823 when Robert McAdam obtained a greatly reduced rental. The change was established in the decade when it appeared possible that the Municipal Corporations Reform Act could introduce reforms unpopular to freemen. To maintain the supply of coal to burgesses in December 1837 meant that not all the colliery's regular customers could be supplied. Since taking over the Tweedmouth colliery, the new tenants had spent over £2,000 and were working "a coal of very superior quality". Production had increased. The 1836 lessees pleaded to be put on the same footing as the occupiers of all the other collieries in the district; namely, a certain annual rent for winning, and not exceeding, a specified amount of coal and the payment of a ten-tale rent for all extra working.⁶¹

By January 1837 the Town Council had received notification from a freeman's committee, appointed to protect the rights and privileges of the Old Corporation in the wake of the Municipal Corporations Reform Act, that the lessees of the colliery were in breach of the lease. They were, contended the committee, employing more hewers than allowed.⁶² To make progress the Council commissioned William Armstrong, of Jarrow Colliery, to view Berwickhill and the main findings⁶³ in his report were:

Survey III

To the Committee of Works of the Borough Council of Berwick upon Tweed																																							
Viewer: William Armstrong																																							
i	The drift had, up to the term of the present lessees, been very injudiciously carried forward.																																						
ii	This colliery was now being worked in a regular and systematic manner, in accordance with the lease.																																						
iii	<p>The only clause of the lease departed from was the number of hewers employed. There had been 32 in December 1836 and 20 in the summer months previously. And yet the quantity of coal raised was still considerably short of what 15 would have produced if obstacles had been removed. This was illustrated by the projected and actual vends:</p> <table><tr><td></td><td>Darg</td><td colspan="2">Vends</td></tr><tr><td></td><td>bolts</td><td>Projected bolts</td><td>Actual bolts</td></tr><tr><td>1831</td><td>24</td><td>108,000</td><td>94,877</td></tr><tr><td>1832</td><td>24</td><td>108,000</td><td>100,758</td></tr><tr><td>1833</td><td>24</td><td>108,000</td><td>113,696</td></tr><tr><td>1834</td><td>28</td><td>126,000</td><td>107,034</td></tr><tr><td>1835</td><td>30</td><td>135,000</td><td>90,567</td></tr><tr><td>1836</td><td>33</td><td>148,500</td><td>118,896</td></tr><tr><td>Totals</td><td></td><td>733,500</td><td>625,828</td></tr></table> <p>The lease intended the payment of a £100 rental for the yearly produce of 15 men's constant work. By employing more the vend was not surreptitiously increased.</p>				Darg	Vends			bolts	Projected bolts	Actual bolts	1831	24	108,000	94,877	1832	24	108,000	100,758	1833	24	108,000	113,696	1834	28	126,000	107,034	1835	30	135,000	90,567	1836	33	148,500	118,896	Totals		733,500	625,828
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iv	Two pits were being worked: the Rise Pit and the Deep Pit.																																						
v	Safety of the pits was being attended to and the present working would produce the greatest percentage of coal.																																						
vi	<p>Number of years each seam is likely to last when worked by 15 men:</p> <table><tr><td>Main Seam</td><td>3½ years</td></tr><tr><td>Stoney Coal</td><td>32½ years</td></tr><tr><td>Cancer Coal</td><td>33 years</td></tr><tr><td>Cowper Eye</td><td>76 years</td></tr><tr><td>Total</td><td>145 years</td></tr></table> <p>This ignores the "edge coal", the Three-Quarter Seam and seams to the west.</p>			Main Seam	3½ years	Stoney Coal	32½ years	Cancer Coal	33 years	Cowper Eye	76 years	Total	145 years																										
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vii	In January 1837, when the selling price of coal was 5d. per boll and 3,930 bolls were disposed of, the freemen claimed 1,544 bolls, at a loss of one halfpenny per boll to the lessees. No less than 40 per cent of the whole vend was sold at the reduced figure. This represents a loss to lessees and Corporation alike.
viii	The lessors should participate in improving the value of the seam.
ix	As there is no means of inspecting the accounts there is every opportunity for fraud and collusion.
x	No barriers between Berwickhill and Unthank are provided for and existing coal could be won in defiance of the Corporation.
xi	No sections of sinkings have ever been preserved.
xii	No plans of workings ever made.
xiii	Never can a lease have been so loosely worded, or, lacking the conditions which in colliery leases are so indispensable.
xiv	Major Johnson & Partners of Scremerston had offered £180 per annum for the colliery when last let by proposal. His intention had been to allow the coal to lie dormant to improve trade at his other collieries. If a clause had been introduced into the lease to supply the freemen's coals, at price not exceeding 5d. per boll, from any of his pits, the Corporation would have enjoyed the rent without any deterioration of coal reserves.
xv	<p>Recommend:</p> <p>Exploit the Cowper Eye Seam for steam purposes at a rental of £100 per annum for selling 150 tens, each ten containing 24 gallons, and 16s. per ten for overs.</p> <p>Liberty of inspecting the accounts and, if desired, lessee provide a monthly account of the vend.</p> <p>Liberty of measuring the boll tub and if found too large such excess deemed to have been in existence for 3 months.</p> <p>Water levels to be inspected quarterly.</p> <p>Regular plans to be inspected quarterly.</p> <p>A barrier to be left next to Unthank.</p>
	<p>28th February 1837</p> <p>William Armstrong Jarrow Colliery</p>

The reference (xiv) above, to the Johnson proposal of 1822 does not match the postscript that had been added to the bid. It could be that Robert Johnson had, at a later date, decided that instead of exploiting Berwickhill to the full it would have made better economic sense to mothball it.

At a meeting of Berwick town Council on 21st March 1837, the Works Committee reported that, in the light of Armstrong's findings, they had reviewed how the freemen of the borough had been supplied with coals. It was impossible to give any indication of the amounts supplied to burgesses as no separate accounts had been kept at the colliery of coals sold at or below 4½d. per boll.

This would seem to have ignored the accuracy of the telling percentage in point (vii) of Armstrong's report. The Works Committee added that the colliery employees had denied that any preference had ever been given to non-freemen "as all carts coming to the Hill took their turn in regular succession" . . . and the carters of freemen "have been supplied with great coal filled by hand in the same manner as afforded to other customers". The Council then ordered that the lessees be allowed to work 148,500 bolls of coals for a rental of £100 per annum and an additional 100 tens for which they would pay a tentale rent of 20s. per ten. It was also decided to implement Armstrong's other recommendations (xv).⁶⁴

BOROUGH OF BERWICK UPON TWEED. COLLIERY TO LET.

To be LET BY AUCTION, in Council on WEDNESDAY the 6th day of July next, at Eleven o'Clock, Forenoon,

For the term of 21 years, from the 4th day of September, 1853,

ALL that Current-going COLLIERY belonging to the Corporation of Berwick, situate within the Manor of Tweedmouth and Spittle, in the Borough of Berwick upon Tweed, commonly called "THE BERWICK TOWN HILL COLLIERY," and all manner of Coal, Mines, Coal Pits, Seam and Seams of Coal open or not open, within and under that part of the said Manor which was formerly a Common, (originally consisting of 800 Acres or thereabouts), which Colliery is now held by the Trustees of Messrs Redpath and M'Adam as Tenants thereof.

This Colliery is remarkable for easiness of access to its working Seams, and the small expense at which Coals are got from it; and it is well worthy the attention of Persons who are not able or may not chuse to sink a large capital in such undertakings.

Further particulars may be obtained, and the Conditions of letting seen on application to Mr LOWREY, the Land Steward, or at the Town Clerk's Office, Quay Walls, Berwick.

Berwick on Tweed, 18th May, 1853.

A draft copy of the 1853 lease has survived and, in addition to covenants retained from earlier versions, it was specific on outputs allowed, mining techniques to be employed and tenants' responsibilities. The lessees would:

Be entitled to win annually, in the first three years, 100 tens of coals, and, during the remainder of the term, 150 tens, with each ten being equivalent to 440 bolls of 36 Winchester gallons each and containing $18\frac{1}{3}$ Newcastle chaldrons of 53cwt per chaldron.

Keep the colliery . . . effectually drained and ventilated . . . effectually walled and timbered . . . in good repair and working order unless prevented by unavoidable creeps, thrusts or other accidents.

Make fit for ploughing all the land above the colliery damaged by mining.

Limits and penalties, written into the lease, were acceptable to lessees who were among the most experienced in winning coal in Northumberland.

John Taylor, the Town Council's colliery viewer, provided advice when the 1874 letting conditions were drawn up. The new lessees, the Scremerston & Shoreswood Coal Company, were granted the right to work the barrier of coal between Scremerston and Tweedmouth royalties, and also leave "to bring through the Berwick Hill workings to the Scremerston pit Coals which may be worked by them in the Unthank estate for which right of wayleave and for water and air courses payment to be paid for each of these at the rate of 20d. per Ten of Coals". The lease placed limits on production and the price of the coals wrought. One other departure from earlier leases allowed the new tenants to burn limestone and make bricks and tiles on site, but not for sale.⁶⁵ The Scremerston & Shoreswood Coal Company had rented the Sunnyside colliery for reasons other than coal extraction.

Towards the close of the 19th century the Scremerston & Shoreswood Company agreed a new lease, similar to the previous, by negotiation rather than via the usual advertisement. This had been on the recommendation of the Corporation's new viewer, Thomas Gilchrist,⁶⁶ though not all of the Council favoured the procedure.⁶⁷ In 1896 Messrs T. & J. R. Gilchrist, Mining Engineers of Newcastle upon Tyne, were appointed to make half yearly surveys of the local colliery at a cost of £15 15s. per annum.⁶⁸ Their reports record what was to be the final phase of winning coal from the Berwickhill ground:

Viewer's report	Coal raised	
	Period	Output
		tons cwt
4 Sept 1897	1896-1897	4,520 3
22 Sept 1898	1897-1898	4,750 13
21 Sept 1899	1898-1899	3,593 17

But, as will be illustrated below, the mine was to survive, albeit in a much reduced form, for another three decades. The first of the Gilchrist reports, for 1897, revealed that the roadway through the barrier between the Berwickhill and Unthank royalties had been achieved strictly according to the lease. Towards the end of the 19th century, output from Berwickhill was being restricted by the terms of the lease of the Greenwich Hospital Estate which compelled their Scremerston lessees to draw half of the total output — from Scremerston, Berwickhill and Unthank — from the Scremerston royalty. This curtailed work at the other two collieries.⁶⁹ In the 1895 lease an outstroke privilege, that allowed the adjoining Unthank to be worked from the Tweedmouth ground, had not been made use of two years later. But the lessors of Berwickhill as well as receiving the fixed or certain rent were also in receipt of watercourse, aircourse and outstroke rents.

In 1898 it was reported that the face of the Sunnyside workings had reached the Unthank barrier, thus exhausting another portion of the royalty. A similar face had been started that would, it was confidently forecast, last for several years.⁷⁰ By 1899 more regular working was taking place and the men were being employed on twelve days a fortnight. At this time they began to convey Unthank coal through the Tweedmouth ground to Scremerston and this entitled the lessors to wayleave rent.⁷¹ The 19th century appeared to be closing on a high note.

20th century

In the first decade of the new century each of the mine surveyors' annual reports included a similar expression, "they have not worked any coal out of your Royalty during the past 12 months . . .".⁷² Initially, it was claimed that this was because "the Stone Band in the Seam had put in very thick"⁷³ and by the 14th September 1904 it was reported that "they temporarily ceased working this Royalty from Pay Ending July 1st 1904 . . .".⁷⁴ The surveyors, however, had already recorded, in September 1900, the telling reality that "the amount of coal left is not great".⁷⁵

The accessible seams at Berwickhill were virtually exhausted and the mine remained open only for wayleave, aircourse, watercourse and outstroke purposes. By 1906 the directors of Scremerston Colliery were seeking a reduction in the certain rent of the Tweedmouth mine because they were not working coal. The Council's surveyors replied that the Scremerston company controlled a considerable area at a reasonable rent⁷⁶ and the request was rejected.⁷⁷

In each of the years, 1914-1918, Messrs T. & G. A. Gilchrist, the surveyors of Berwickhill, returned to the Mayor of Berwick their annual fee of £15 15s., to be given to local charitable societies who were helping the war effort.⁷⁸ Then, in 1918, when the surveyors suggested that their annual fee should be reduced the Council's Farm & Works Committee rejected the proposal.⁷⁹

As Table 1 reveals, a new lease was sealed in 1916 with the Scremerston Coal Company who, year by year, maintained the colliery for the purposes outlined above. Coal was not being drawn from the Tweedmouth ground. In 1926 the Scremerston Company were again asking for a remission of the certain rent on Berwickhill.⁸⁰ This, the Farm & Works Committee referred to the newly created Trustees of the Berwick Freemen.⁸¹ The control of the colliery had returned to the lessors, who quickly reduced the rental to £50 per annum, while Berwickhill remained unproductive.⁸² This was to continue for a decade.

In February 1928 an underground waterway from the Berwickhill workings choked and caused flooding at Spittal and cost the Corporation £95 12s. 10d. In error this was charged to the Scremerston Coal Company who redirected the bill to the Trustees who, as owners, were liable. The Coal Company were responsible only for works constructed during their tenancy and the waterway in question dated from about 1827.⁸³ Three years later the Trustees had also to demolish a derelict chimney stack near Heatherytops Farm.⁸⁴

On the 9th September 1932 the Scremerston Coal Company gave twelve months notice to terminate their tenancy of Berwickhill.⁸⁵ They informed the Trustees that since the commencement of their lease in 1895 no workings had taken place at the Sunnyside mine and they had paid some £3,000 in dead rent. While the evidence of Messrs Gilchrist, above, points to coal having been won in the final few years of the 19th century, there was no denying that the Tweedmouth property had not yielded coal for over thirty years. The Trustees, keen to maintain their colliery, persuaded the mining company to continue with the

lease at a nominal rent of £5 per year.⁸⁶ Then, in 1936, the Scremerston Coal Company went into liquidation and while some of its interests were taken over by the Scremerston Main Collieries Limited,⁸⁷ the new company did not wish the tenancy of Berwickhill to be transferred to them. The Trustees still hoped to retain the colliery and Messrs Gilchrist were asked what steps needed to be taken to preserve it.⁸⁸ They also proceeded to register Berwickhill under the Coal (Registration of Ownership) Act 1937.⁸⁹

A compensation claim was made under the Coal Act 1938 for £470. The total area of the holding was 1,157.5 acres and, while the claim had been made at 10s. per acre, this was reduced by the Northern Regional Valuation Board to 2s. 6d. per acre. In the event, £118 was received. By 1942, Scremerston Colliery was facing closure and the Trustees accepted, with some reluctance, that Berwickhill Colliery had to be abandoned.⁹⁰ It had ceased to be a working mine in 1899 and had survived until 1936 by unusual circumstances.

Accidents

Berwickhill was never more than a small colliery with a workforce that seldom exceeded 25. Like most other pits in the district it appears to have been generally free from explosive and flammable gases. Consequently, the major hazards to those working underground must have been roof-falls and movements up and down the shafts. Although the five accidents at the Tweedmouth colliery which have been traced are insufficient to support this, it will be noted below that two of the accidents involving colliers resulted from roof falls and one from "riding the shaft". The Berwick coroners' inquisitions, from 1745 onwards, which have survived, include only two that refer to fatal accidents resulting from coal being wrought. The first was not a colliery accident. It resulted from a complete absence of mining skills when 15-year-old Wauchope Crombie was accidentally killed on the 27th March 1804 by a rock fall, when digging for coal on the cliffs below the Maudlin fields.⁹¹ The Berwickhill accidents were:

I. 28th December 1807

William Manners,⁹² aged 15 years, of Spittal.

The weekly newspaper reported:⁹³

On Monday last, some boys were playing near the Coal Pits in the vicinity of Tweedmouth, one of them in stepping backwards,

slipped and fell into one of the Pits, from whence he was taken out dead.

II. 24th December 1829

William Selkirk, pitman, aged 29 years, of Spittal.

The Overseer of Tweedmouth Parish drew upon the depositions of John Smith and Thomas Marshall, the only other men in the pit at the time of this accident, when he recorded⁹⁴ the happening:

Mr Selkirk . . . was riding the Shaft when about halfway up to the top, the Rope slipped that he had his leg into and immediately went to the bottom and died instantly. The deceased . . . left a Wife and two children. . . . John Smith and Thomas Marshall . . . were at the Pit Bottom waiting the chain returning to ride.

A second report⁹⁵ provided additional detail:

On Tuesday afternoon, William Selkirk, pitman, on making an exertion to clear the descending tub, when coming up the shaft of Berwick hill colliery, unhooked the chain, by which he was suspended, and was precipitated to the bottom. We need scarcely add that death was the consequence. The deceased . . . has left a pregnant widow and two children.

III. 12th January 1830

Catharine Smart, aged about 10 years, of Berwick Colliery.

Mr Mein, a witness, provided the Overseer of Tweedmouth Parish with an account⁹⁶ of this tragedy:

Cathrine Smart a young girl . . . went with her father's dinner. Her Father is the Keeper of the Machine that draws the coals to the Bank. When the girl was returning home the wind blowing very high, blew her Petticoats so near the Drum so that they got entangled with the Rope that goes round the same, drew her round the Drum and bruised her so severely that she Died Instantly. Catharine was buried in Tweedmouth Churchyard three days after the fearful accident.⁹⁷

IV. 27th May 1839

John Reid (or Reed), pitman, aged 24 years, of Spittal.

The coroner's inquisition told of John Reid being with others employed in the Berwick Hill Colliery when "Stones in that part of the Work . . . did fall upon him . . . and bruise and injure him. . . . John Reid did languish until the 28th . . . when he did die". The verdict was that death resulted

"accidentally casually and by misfortune . . . and not otherwise". The coroner, Ben Nicholson, held the inquisition in the Bell Inn, Spittal.⁹⁸

The local newspaper reported⁹⁹ on the incident:

FATAL ACCIDENT

On the morning of Monday last, a quantity of stones and soil fell from the roof of Berwick Hill colliery upon two of the workmen, John and Giles Reid, brothers of Spittal. Both were seriously hurt, particularly the former, who was seriously injured about the head. They were conveyed to their homes and medical aid was promptly procured. In the case of John Reid, the occurrence has terminated fatally, he having survived only until the following morning; his brother is considered likely to recover. Both were young men: the deceased who has left a widow and one child, was only twenty-four years of age.

V. 1st April 1840

Thomas Burn, collier, aged 34 years, of Spittal.

This, the final accident at Berwickhill to be traced, occurred on Wednesday morning, the 1st April 1840, when Thomas Burn's thigh was broken by a fall of stone from the roof.¹⁰⁰ On the 22nd August 1841, Thomas Burn died¹⁰¹ and was buried at Tweedmouth four days later.¹⁰² The cause of Burn's death has not been ascertained but it may have resulted from the accident sixteen months earlier.

The accidents listed for Berwickhill are almost certainly incomplete and the above are unusual in that two of the four definite fatalities were of children. Each of the deaths would be a tragedy for the families and friends of the victims but the death that must have stunned the district would be that of ten-year-old Catharine Smart, particularly as her father was in charge of the winding engine below the drum on which she was killed. This was an horrific accident.

Labour relations

Once the new lessees took over Berwickhill in 1836 it must have been soon apparent that their relationships with a number of the workmen were poor. Between 1837 and 1839, Richard Reavely, one of the under-lessees responsible for the workforce at the colliery, prosecuted in the Berwick court of petty sessions three of his colliers. The first was John Reid, who, on the 21st July 1837, was charged with having refused to work. He admitted to the charge but justified his conduct on the grounds that the men with whom he had been ordered to work would not allow him to do

so. Reavely produced evidence to prove that one of the men had invited Reid to work with them. On the promise of the defendant to return to work the court ordered the complainant, Reavely, to withhold 7s. 6d. from the defendant's wages for costs and also fined Reid 11d.¹⁰³ Later, in the same month, on the 27th October, Reavely complained to the magistrates that Andrew Metcalf had been absent from work. The defendant pleaded guilty and after promising to return to his employment the charge was withdrawn.¹⁰⁴ Two years later, on the 4th October 1839, Reavely brought the third case, the detail of which has not survived, against Thomas Burn. The Spittal collier was convicted on his own confession and sentenced to 14 days imprisonment with hard labour.¹⁰⁵ These work-charges were not, however, all master-motivated. On the 3rd January 1838 George Hall charged Richard Reavely with breach of contract. The defendant pleaded not guilty and after hearing the evidence the justices dismissed the case.¹⁰⁶

These few cases represent just two years of troubled labour relationships in Berwickhill's four hundred years history. What is more disturbing is that John Reid, within two years of being prosecuted, had died as a result of an underground accident and Thomas Burn was dead less than eighteen months after being imprisoned.

Field remains

A double gate still leads into the field in which the 1824 working existed and a mound, that runs the width of the field to a recent housing development, seems to have been a track to and from the workings that have been completely removed. There is also a second narrow track, bordered with straggly hawthorns, from Cow Road to the 1824 Berwickhill site, that is still in use. A field on the seaward side of this track shows undulations that resulted from mining subsidence and the first modern house, on the other side of the path, has landscaped within its garden, waste from the 1824 mine. The remainder of the old pit is now completely covered with post-World War II housing.

More prominent are the mining remains to the west of the stretch of the former Great North Road, and later A1. Opposite the western entrance to the Cow Road is a waste mound of approximately 0.75 acre. On the southern edge of this waste heap are massive pieces of slag while on the northern edge is a circular stone disc, 5 feet in diameter and 18 inches thick. This may well be the only surviving relic of the windlass that stood on the site in 1866 (Figure 1). Around it are moss-covered building stones and fragments of blue roof slates. This was the site, now scrub-covered, of one of the mid-19th century pits. Another clearly

defined waste heap, easily visible from the former A1, stands in the field due west of the Miners Arms. Now grass-covered, it is approximately 30 feet high, on its steep-sided southern face, before it tails back into the hillside. This is also about 0.75 acre in area. The line of a well-defined track runs north from it and soon turns eastward to join the main road, 60 yards south of the Cow Road. Four cottages, close to Heatherytops, that could have been built as miners' cottages are 300 yards from this former pit of 1866. Catharine Smart's address in 1830, given as Berwick Colliery, pointed to the presence of cottages for employees at Berwickhill.



Figure 5: A windlass base *in situ* at Banavie, on the Caledonian Canal, similar to that found on the Sunny-side waste heap of 1866.

The remaining evidence of other 1866 workings is less impressive. The coal refuse, shown on Figure 1, between the former Border Inn and Springhill farm features as a clean-lined mining waste hillock that stands apart from its agricultural surrounds. Although grass-covered it contains some slag. The remains of an old track linking the waste heap to Priorhouse Road can be discerned. At the side of this trackway, amidst deciduous trees, are the concrete foundations of what were mine buildings, 25-30 yards from Priorhouse Road. A brick, found at the side of the largest area of concrete was made by Sherriff of Dunbar. Other smaller waste heaps are sited towards Springhill farm.

Only one of the old workings to the west of Springhill farm can be distinguished as low waste heaps, grass-covered and boulder-strewn. Nearby, the main site of Berwickhill Colliery of 1866 is also represented by a low undulating waste heap with a deep circular depression on its southern end which possibly denotes the position of the former shaft. There are also a

few building stones breaking the surface of this heap.

The surface remains of Berwickhill Colliery although scant are sufficient to illustrate the considerable area of mining and the prominent waste heaps that resulted even from a colliery that stored its waste below ground. This was not a working which defaced the surface to the extent that many collieries did. It also seems that the 1824 site, standing as it does on a platform, was well hidden from the Berwick town level of pre-1850. Certainly, the 1866 workings could not have been seen from the old town.

Deductions and assumptions

Coal was wrought in Tweedmouth over four centuries, 1500-1900, and it is surprising that the colliery at the centre of this enterprise had not been researched previously. While the absence of the more practical records of mining and a continuous run of annual yields has diminished the value of the study, there has been sufficient material available to provide a fascinating subject for research.

The evidence points to the lessors, the corporation, whose business, prior to 1835, was transacted by burgesses in guild assembled, being inadequate to the task of having the oversight of a coal mine. The Guild, sadly lacking in experience, were told as late as 1836 by William Armstrong, a professional mining engineer, that, "never can a lease have been so loosely worded, or, lacking the conditions which in colliery leases are so indispensable". The freemen were amateurs in controlling a colliery which they saw as a provider of fuel for themselves and the townspeople. But, if the lessors were inadequate, the same must be said for many of the lessees, especially the earlier ones. Most of these had no background in mining and consequently the mine developed haphazardly and irregularly. As stated, bore records and plans of underground workings were not preserved and the development, from one lessee to the next, lacked an overall strategy. The colliery, partially because of its size, lacked financial investment to upgrade the primitive methods of working and the drawing of coals. Lessees with little or no knowledge of mining must at times have acted irresponsibly. In a colliery that developed as Berwickhill did, it may be assumed that working conditions would be difficult in seams that were extremely wet. The absence of ventilation fans would result in the workings being dusty and suffocating. Lighting would, for most of the time, be insufficient. Candles would be used in the earliest phases in the colliery's history with a range of oil lamps, and acetylene lamps, being pressed into service later. Fortunately, flammable and explosive gases were unlikely to have been a major problem and

safety lamps, if used, would belong to the colliery's later phases. The problems of working Berwickhill were formidable, as Robert McAdam discovered in 1823.

One feature of management at the colliery were the promises made that did not always materialise. For example, when McAdam petitioned the Guild in August 1823 for a reduction in the colliery rent, one of the promises that he made was to open a coal yard in town. But it was six years before McAdam and his partners again petitioned the Guild, on the 28th December 1829, to be allowed to use "the Ditch around the Mound or Bastion at the Head of Bank Hill as a Depot for their Coals".¹⁰⁷ On the 2nd June 1830 the Master General and the Board of Ordnance rejected the request.¹⁰⁸ Doubtless, the lessees would have argued that the failure of the 1823 promise was not their fault.

Today, it is difficult to imagine that a mine had existed for so long, so close to Berwick. But, as indicated, it was a valuable natural asset without being an industrial scar on the natural and historic scene at the mouth of the Tweed. Although never more than a small working, which seldom employed more than 15 hewers, it provided a valuable supply of fuel. Indeed, its potential was realised more than might have been deserved, it served its purpose and most of its accessible seams were virtually exhausted by the close of the 19th century. England's most northerly colliery passed through an interesting sequence: with a relative ease in letting the colliery, problems were encountered in the 18th century that were compounded in the 19th century, with the final phase in the colliery's history, in the 20th century, being for reasons other than winning coal from its own ground. In spite of the two major handicaps, referred to in 1836, the colliery remained in production for more than half a century.

ACKNOWLEDGEMENTS

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BERWICK COLLIERY: GLOSSARY OF MINING TERMS USED

A standard reference drawn upon: G. C. Greenwell (1888) *A glossary of terms used in the coal trade of Northumberland and Durham*. London: Bemrose.

- | | |
|-------------------|--|
| air course | Course that a current of air followed when circulating and ventilating underground workings. |
| bank | Above ground. Term first used at Berwickhill in the conditions of letting, 1801. |

barrier	Wall of coal left against an adjoining royalty as a precaution against water and foul air. Barriers were of varying thicknesses, from 10 yards upwards.
blue metal	Shale of a bluish-purple colour, as mentioned in Survey I, 1801.
boll	Coal measure which contained 9,676 cubic inches or 34.9 imperial gallons. Term first used by Samuel Stanton in 1724.
chaldron	Measure, the Newcastle version of which contained 53 cwts or 22.5 bolls of coal. The London chaldron was equal to 28.3 cwts. 16th century spelling could be, as shown in the text, chaldre, and this was abbreviated to chald. or ch.
coal	Graded according to size by screening. Resulting sizes at Berwickhill were great, fire and small. More general to refer to round, nuts and duff.
creeps	Rising, heaving or lifting of the floor in underground workings. Could be caused by insufficient pillars having been left.
darg	Term used by John Henderson in 1822 (Survey II) when referring to a day's work or a definite amount of work. More specifically it could be a fixed quantity of coal to be worked for a certain price.
dead small	Used by John Smith and James Thompson in 1803 when referring to the grade of coal that included the smallest pieces and dust. Later known as duff.
dyke	In Survey II this referred to a slip of ground that caused the coal seams to separate. Generally a dyke is a volcanic intrusion.
hewer	Man who extracts coal.
hill	Colliery where coals were sold to carts for direct delivery. The term was used only once, in 1837, in the Berwickhill documentation, though it had been used earlier by John Fuller in his <i>History of Berwick</i> , 1799.
landsale	Similar to the term 'hill' but also a colliery to which there is no railway, tramway or canal, by which the coal was moved. Berwickhill was, throughout its career, a landsale colliery.
lease	Formal agreement, for a term of years, between the proprietor of a royalty and the individual or those who would work the mine.
New Winning	A successful new sinking in the quest to win coal. As in 1822 (Survey II), and not infrequently, a recently opened shaft was given the name, New Winning. This could be retained for the lifetime of the pit.
outstroke	In the restricted sense, as used by Anthony Lambert in 1793, it was to branch out underground to provide a new working. More generally, it was a means by which an adjoining royalty could be worked by drifts.
outstroke rent	Paid for the privilege of breaking the barrier and working the coal from an adjoining royalty. The first, in 1793, was through the Berwickhill-Scremerston barrier.
overs	Quantities of coals wrought beyond the stipulated amounts for which the fixed or certain rent was paid. These quantities were subjected to a separate additional rent.

pillar	Oblong or square mass of coal left during the first working for the support of the roof.
rent	Colliery rent consisted of a fixed or certain rent, in consideration of which a certain quantity of coals was allowed to be annually worked, but paid whether that quantity was worked or not.
royalty	Coals — or minerals — with the right of working them. Normally the property of the freeholder.
strick	Term used by the viewer Ramsey in 1801 (Survey I), to denote a geological mishap that would disrupt mining.
ten	Measure of coal upon which a lessee's rent was paid. Dealt with in Survey II.
tentale	Rent paid to a lessor for a ten of coals. Referred to by Ralph Brody in 1836 as a rent paid for working beyond an agreed amount.
thrusts	Occurred when both the roof and floor of a seam of coal were hard, and when the pillars, insufficient for the support of the superincumbent strata, were crushed by their pressure.
trouble	Geological fault.
tub	Container used to convey coals from the working faces to the surface. The description of the Berwickhill tubs pointed to their having been corf- or basket-like and without the tram-wheels of larger and later tubs. The tub size at Berwickhill was first given in the lease of 1730.
water course	Course that water followed in ridding a seam of unwanted water. The 1793 lease allowed the lessees to make whatever water courses were necessary.
wayleave rent	Charge made for the privilege of allowing coals to be conveyed over one's land. Could also relate to the conveyance of coals worked in another royalty by an outstroke and drawn up a pit.

SOURCES AND NOTES

1. The seven different names were taken from:
 1730 — Berwick Record Office (hereafter BRO), F20/2, 5th February 1730.
 1745 — Ibid., H2/34, 1745/46, 1.
 1793 — Ibid., C15/91/3, 9th March 1793.
 1822 — Ibid., B10/28, 15th July 1822.
 1840 — *The Berwick Advertiser*, 21st March 1840, 1.
 1866 — 1st edition Ordnance Survey 6 inches to 1 mile map.
 1895 — BRO, D1/7, 6th March 1895, 778.
 The name of 1793 is a derivation of Cooper Eye, the seam being worked at that time. It is likely that this was the name given to the colliery only by local miners.
2. Pit names from:
 1837 — Ibid., D1/1, 7th March 1837, 221.
 1926 — Fowler, A. (1926), *The Geology of Berwick-upon-Tweed, Norham and Scremerston*. London: HMSO (Memoirs of the Geological Survey, England), 11.
3. A more detailed view of the solid geology of north Northumberland is available in:
 Bainbridge, J. W. (1991) 'Lime kilns of north Northumberland', *History of the Berwickshire Naturalists' Club*, 45, 111-137.

4. Fowler, op. cit., 11-15 and BRO, D1/1, 7th March 1837, 224-225.
5. Nef, John U. (1977), "An early energy crisis and its consequences", *Scientific American*, 237, 140-151.
6. Ibid., 141.
7. Bain, Joseph (ed.) (1888), *Calendar of documents relating to Scotland preserved in Her Majesty's Public Record Office, London*, IV, AD1357-1509. Edinburgh: HM General Register House, 456.
8. Raine, James (1852), *The history and antiquities of North Durham*. London: John Bowyer Nichols, 241-242.
9. Bainbridge, op. cit., 118.
10. Raine, op. cit., 290.
11. Chaldre: the meaning of this, the first mining term used in the paper, and the others that follow, can be found in a glossary, at the end of the text.
12. Raine, op. cit., 229.
13. Ibid., 25.
14. Colvin, H. M. (ed.) (1982), *The history of the King's works*, IV, 1485-1600 (Pt. II). London: HMSO, 620.
15. Raine, op. cit., 242-243.
16. BRO, F20/2, 1st July 1687.
17. Raine, op. cit., 241.
18. BRO, B1/15, 15th March 1716/1717, 15, 18 & 29; November 1717, 12-12a & 25a-26a.
19. Ibid., 9th October 1724, 186-187.
20. Ibid., 16th October 1724, 189-189a.
21. A copy of the 1717 lease has not survived. But it is assumed that the size of the tub in use was the same as that of 1730: 14 inches deep, 21 inches in diameter at the top and 22 inches indiameter at the bottom.
22. "Two Hooks at the Pitt": this clause, that appeared in later documentation, is a technical expression, the exact meaning of which is uncertain. But they appear to have been hooks used when coals were drawn to the surface in corves, or the small Berwickhill tubs. A fuller meaning is provided under the term clippers in:
Greenwell, G. C. (1888), *A glossary of terms used in the coal trade of Northumberland and Durham*. London: Bemrose.
23. BRO, B1/15, 16th October, 1724, 189a.
24. Ibid., 162, 236-236a & 339.
25. Ibid., F20/2, 5th February 1730.
26. Ibid., 5th February 1737.
27. Ibid., 15th January 1741.
28. Ibid., 1748.
29. Ibid., H2/34, 1745/1746, 1.
30. Ibid., F20/2, 20th September 1758.
31. Ibid., 1st September 1759.
32. Ibid., F22/3, 1780.
33. Ibid., B1/21, 15th February 1793, 271.
34. Ibid., 18th February 1793, 273.
35. Ibid., C15/91/3, 26th February 1793.
36. Ibid., 9th March 1793.
37. Ibid., 26th March, 1793.
38. Ibid., B1/21, 12th April 1793.
39. Ibid., F20/2, 1st July 1793.
40. John Steavenson: almost certainly a burgess of Berwick. Could have been a Newcastle carpenter, second son of Benjamin Steavenson, who was admitted to the freedom on 21st December 1764. Alternatively, he seems more likely to have been a Newcastle lawyer acting on behalf of the

Corporation. In the late 18th century there were numerous Steavensons and Stevensons, resident in Newcastle, Berwick and London, who were freemen. An 1820 directory includes a John Steavenson, an attorney, of Mosley Street, Newcastle.

Pigot, J. (1820), *The commercial directory of . . . the four most northern counties of England, for 1820-21 & 22*. Manchester: J. Pigot, 598.

41. BRO, B10/15, 11th May 1801.
42. *Archaeologia Aeliana* (1913), 3rd Series, X, 119-121.
43. BRO, B10/15, 22nd May 1801.
44. Ibid., F20/2, 4th September 1801 & F22/3, 4th September 1801.
45. Ibid., F20/2, 4th September 1801.
46. Ibid., F20/2, 4th September 1801.
47. Ibid., C15/91/3, 3rd March 1803.
48. Ibid., B1/22, 20th June 1803, 547.
49. Ibid., 24th June 1803, 551.
50. Ibid., B1/25, 17th April 1822, 368 & 376; 10th May 1822, 382 & 384.
51. Ibid., B10/28, 23rd May 1822.
52. As indicated in note 11 above, the meaning of each technical term is included in the glossary. This term, however, required immediate attention:
Ten — A measure of coals upon which a lessee's rent was paid. It usually consisted of 440 bolls of 8 pecks each, but varied under different landlords. As the weight of a boll of coals was 2.4 cwt the weight of the ten of 440 bolls was 52.8 tons. Thus, the ten must not be confused with the ton.
53. BRO, B1/25, 3rd June 1822, 388.
54. In the Berwick Record Office there is an additional copy of the 1822 letting conditions (F22/3) and appended to it are two notes:
 I A Tub to hold 24 Gallons or 3 Winchester Bushels

	Inches	
Must be inside measure	28	Diameter at Top
	26	at Bottom
	12	Inches Deep
Outside Measure	30	Inches at Top
	27½	at Bottom
	13¾	Depth
- II

	Townhall 17 June 1822
Old tub 14 inches deep, 21 inches diameter at the top and 22 inches at the bottom — and 9½ inches deep same dimensions.	

These provide a record of tub sizes in use at Berwickhill. By 1822 the measures may have been expressed in capacities, as Smith and Thompson had sought almost two decades earlier, but tub measurements were still, in 1822, not entirely forgotten.
55. BRO, B10/28, 13th & 15th July 1822; F21/1 & F22/3, 17th July 1822.
56. Ibid., B1/25, 4th July 1822, 396-397.
57. Ibid., B1/26, 11th August 1823, 188 & 195-197.
58. Ibid., 12th September 1823, 245-247.
59. Parson, William, and White, William (1828), *History, directory and gazetteer of the counties of Durham and Northumberland*, II. Leeds Printed: Edward Baines, 345.
60. BRO, D1/1, 17th January 1837, 203 & 208-209.
61. Ibid., 20th December 1836, 193 & 197-199.
62. Ibid., 17th January 1837, 202 & 208-209.
63. Ibid., 7th March 1837, 219-229.
64. Ibid., 21st March 1837, 241-242.

65. Ibid., D1/6, 20th May 1874, 29.
66. On 26th March 1879 the death was announced of John Taylor, the Inspector of the Corporation's colliery.
Ibid., 26th March 1879, 284 & 288-289.
67. Ibid., D1/7, 6th March 1895, 781-782; 7th May 1895, 793 & 797.
68. Ibid., D1/8, 5th January 1896, 25 & 29.
69. Ibid., 28th April, 1897, 302 & 305.
70. Ibid., 3rd October 1898, 598.
71. Ibid., 24th March 1899, 712.
72. For example, *ibid.*, D1/9, 26th September 1900, 124.
73. Ibid., D1/9, 3rd April 1900, 23; 6th October 1902, 124.
74. Ibid., D1/10, 3rd October 1904, 165.
75. Ibid., D1/9, 26th September 1900, 125.
76. Ibid., D1/10, 1st October 1906, 511.
77. Ibid., 9th November 1906, 535.
78. Ibid., D1/12, 9th November 1915, 394; 12th February 1918, 527.
79. Ibid., 12th February 1918, 527.
80. Ibid., D4/20, 4th September 1926.
81. Ibid., 24th September 1926.
82. Ibid., K8/1, 1926/1927, 2-3, 22 & 25.
83. Ibid., 9th March 1928, 89.
84. Ibid., 10th July 1931, 289.
85. Ibid., 9th September 1932, 340.
86. Ibid., 11th November 1932, 351.
87. Ibid., K8/2, 8th May 1936, item 46.
88. Ibid., 5th June 1936, item 59.
89. Ibid., 3rd December 1937, item 16; 7th January 1938, item 24; 9th June 1939, item 86.
90. Ibid., 6th March 1942, item 27.
91. Ibid., C14/6, 28th March 1804 & M54, 28th March 1804.
Holy Trinity Church register, BRO M54, records that Crombie had been the son of James Crombie, fisherman, deceased, and his wife Margaret, formerly Marshall.
92. BRO, M62, 28th December 1807.
93. *The British Gazette & Berwick Advertiser*, 2nd January 1808, 4.
94. Morpeth Record Office, Tweedmouth Parish Overseers letter book, 24th November 1829.
95. *The Berwick Advertiser*, 28th November 1829, 4.
96. Morpeth Record Office, *op. cit.*, 12th January 1830.
97. BRO, M62, 12th January 1830.
98. Ibid., C14/20, 29th May 1839.
99. *The Berwick Advertiser*, 1st June 1839, 4.
100. Ibid., 4th April 1840, 4.
101. BRO, M62, 26th August 1841.
102. *The Berwick Advertiser*, 28th August 1841, 4.
103. BRO, PS 4/1, 21st July 1837.
104. Ibid., 27th October 1837.
105. Ibid., 4th October 1839.
106. Ibid., 3rd January 1838.
107. Ibid., B1/28, 28th December 1829, 32.
108. Ibid., 2nd June 1830, 100.

FIELD NOTES AND RECORDS — 1993

BOTANICAL RECORDS

D. G. Long

Royal Botanic Garden, Edinburgh EH3 5LR

Bryophytes

All records are from Berwickshire vc 81, by D. G. Long, during 1993. Nomenclature follows Corley & Hill, *Distribution of Bryophytes in the British Isles* (1981). All records are supported by a voucher specimen in the Edinburgh herbarium.

Mosses

- Andreaea rathii* subsp. *falcata*. Exposed rock outcrop by Dye Water above Rathburne Hotel NT6857, 14 February. New to vc 81.
- Grimmia decipiens*. Exposed rock outcrop by Dye Water above Rathburne Hotel NT6857, 14 February. New to vc 81.
- Ulota drummondii*. Abundant on willows by Dye Water above Longformacus NT6857, 14 February.

Liverworts

- Riccia sorocarpa*. Lumsdaine Farm NT8769, 2 February. Surprisingly rare in Berwickshire.
- Diplophyllum obtusifolium*. Old quarry, Threepwood Bridge NT5144, 12 February. New to vc 81, but not unexpected as a weedy species.
- Jungermannia exsertifolia* subsp. *cordifolia*. Silty boulders, Dye Water above Longformacus NT6857, 14 February. Third record for vc 81.

Vascular Plants

Nomenclature follows Kent, *List of Vascular Plants of the British Isles* (1992). All are field records made during 1993 except where otherwise indicated; * refers to an introduction.

- Arenaria serpyllifolia* subsp. *leptoclados*. SLENDER SANDWORT. Ha-Ha, The Hirsell NT8240, 1 August, M. E. Braithwaite, det. Dr G. Halliday. First confirmed record for vc 81.
- Asplenium marinum*. SEA SPLEENWORT. Sandstone rocks near Ladykirk NT84, 21 August, M. E. Braithwaite. The remarkable

inland record of Dr Clarke, 1838, refound 14km from the sea. This fern is very frost-sensitive and may be protected here by heat from sunshine being stored by the rocks, even in winter.

Atriplex prostrata. SPEAR-LEAVED ORACHE. Road verge, A1, Penmanshiel NT7968, 19 June; A697, Crook's Lodge NT8140, 1 August, M. E. Braithwaite. First and second inland records for vc 81.

Carex punctata. DOTTED SEDGE. Burnmouth NT9560, July 1882, S. A. Stewart. The only east coast record for the British Isles accepted by A. C. Jermy, A. O. Chater and R. W. David (1982) *Sedges of the British Isles*, B.S.B.I. p. 148. The specimen is in the Natural History Museum, London.

Catabrosa aquatica. WHORL GRASS. Trampled reed bed, Mire Loch NT9068, July, D. Patterson. A notable addition to the flora of St Abbs Head N.N.R.

Centaurea scabiosa. GREATER KNAPWEED. Lamberton railway NT9659, 5 June 1980, C. Sargent and J. O. Mountford. Second record for vc 81.

Centaureum erythraea. COMMON CENTAURY. Wooded bank, Tweedside, Ladykirk Bridge NT8947; ride, Lithtillum Wood NT8040, 24 July, M. E. and P. F. Braithwaite.

**Chelidonium majus*. GREATER CELANDINE. Woodland edge by road, Lennel NT8440, 24 July, M. E. and P. F. Braithwaite.

**Clematis vitalba*. TRAVELLER'S JOY. Wall, lane from Lennel to Tweed NT8540, 24 July, M. E. and P. F. Braithwaite.

Cochlearia danica. DANISH SCURVY-GRASS. Road verge, A1, Brockholes NT8264; A1, Houndwood NT8463, 1 May, M. E. and P. F. Braithwaite. Large colonies. First and second inland records for vc 81.

Cochlearia officinalis. COMMON SCURVY-GRASS. Roadside bank, A1, Bowshiel Wood NT7967, 1 May, M. E. and P. F. Braithwaite; A1, Glen Fin NT7868, 22 May, M. E. Braithwaite and D. Walton. Well-established. First and second inland records for vc 81.

Dactylorhiza incarnata × *D. purpurella*. EARLY × NORTHERN MARSH ORCHID. Old quarry near Grantshouse NT8264, Lady M. Elliot, det. S. J. Clarke. First record for vc 81.

**Doronicum plantagineum*. PLANTAIN-LEAVED LEOPARD'S-BANE. Tweed banks, Milne Graden NT8744, 1 May, M. E. and P. F. Braithwaite. Rather extensively naturalised.

Festuca pratensis × *Lolium perenne*. HYBRID FESCUE. Riverside, R. Leet at The Hirsell NT8340, 1 August, M. E. Braithwaite. First record for vc 81 since 1893.

- Galium sternerii*. LIMESTONE BEDSTRAW. Rock outcrop, Gaitheugh, Gledswood NT5934, 15 May, M. E. Braithwaite. Professor J. H. Balfour's 1852 record refound. Only record for vc 81.
- Glyceria maxima*. REED SWEETGRASS. Riverside at Ladykirk NT8946, 29 May, M. E. Braithwaite. Second record for vc 81.
- Goodyera repens*. CREEPING LADY'S-TRESSES. Pine wood near Hirsell Law NT8342, 17 July, M. E. Braithwaite. First record since 1956 for vc 81.
- Lamium purpureum* var. *alba*. RED DEAD-NETTLE (WHITE FORM). Arable edge near Marlfield NT8145, 10 June, M. E. Braithwaite. G. Johnston reported this variety as frequent about Duns, 1853.
- Mentha arvensis*. CORN MINT. Woodland ride, Dunglass Wood NT8241; Lithtillum Wood NT8040, 24 July, M. E. and P. F. Braithwaite. Plentiful in an unexpected habitat.
- **Milium effusum*. WOOD MILLET. Policy woodland, Swinton House NT8147, 10 June, M. E. Braithwaite. Second extant record for vc 81. Probably an introduction here.
- Poa angustifolia*. NARROW-LEAVED MEADOW-GRASS. Sandstone wall top, Tweedside below Ladykirk House NT8845, 29 May, M. E. Braithwaite, det. J. R. Edmondson. First record for vc 81.
- Persicaria lapathifolia*. PALE PERSICARIA. River shingle, Ladykirk NT8946, 21 August; pool margin, Lithtillum Loch NT8040, 12 September, M. E. Braithwaite det. J. Akeroyd. Second and third confirmed records for vc 81.
- Rumex maritimus*. GOLDEN DOCK. Pool margin, Lithtillum Loch NT8040, 17 July, M. E. Braithwaite. First record for vc 81 since 1952.
- Schoenoplectus tabernaemontani*. GREY CLUB-RUSH. Pond, Morningbank, Swinton NT8347, 21 August, M. E. Braithwaite. First record for vc 81; considered native.
- Teesdalia nudicaulis*. SHEPHERD'S CRESS. Near Gaitheugh NT5934, July 1877, A. Brotherston. First record for vc81. The specimen is in the Natural History Museum, London. A search for the plant in 1993 was unsuccessful.
- [*Vinca herbacea*. PERIWINKLE. A. G. Long's record 14 May 1984 from a roadside bank at Hutton Bridge NT9254 is now known to be an error; the plant is a form of *Vinca minor* with narrow leaves. M. E. Braithwaite, 16 February.]

ZOOLOGICAL RECORDS

Crustaceans

A Woodlouse new to Selkirkshire

A. Buckham

On returning from working my light-trap I just set the equipment into a corner of the garden; the electrics are housed in a plastic bag, and laid on the gravel by the back door. At this time it had been there for several days, and on moving it on 12th September 1993 I saw a number of minute pink creatures scuttling for cover, and in an instant I had one in a glass tube. The microscope showed me a woodlouse about 4mm long, pinkish with a dark streak on the upper side. Consulting the book *Woodlice* by S. L. Sutton identified my specimen as *Androniscus detiger* Verhoeff. 1908, with a southern distribution, but rare in Scotland.

A call to Charles Rawcliffe at Edinburgh (who is County Recorder for woodlice and other groups) gave me the pleasant surprise of having made the first recording of this species for Selkirkshire; also it had not been recorded for any of the other Border Counties. Records are held for Midlothian and for West Lothian.

Thanks are due to Charles Rawcliffe for information on distribution.

Further reading: Sutton, S. L., *Woodlice*, Ginn & Co. Ltd., London 1972.

Lepidoptera

A. G. Long

Tweedmouth House, Berwick upon Tweed.

All for Tweedmouth vc 68, unless otherwise stated.

Orthosia gothica Linn. HEBREW CHARACTER. 21 April.

Xanthorhoe fluctuata Linn. GARDEN CARPET, several 3-18 May, 13 June, 7 July, 25 August.

Anthocharis cardamines Linn. ORANGE TIP, Burnmouth vc 81, 3 May, D. G. Long.

Spilosoma luteum Hufn. BUFF ERMINE, 10 June.

Tyria jacobaeae Linn. CINNABAR, West Newton, 12 June, H. F. Church.

Agrotis exclamationis Linn. HEART AND DART, 15 June.

Vanessa atalanta Linn. RED ADMIRAL, 16 June, H. F. Church.

- Xanthorhoea montanata* D&S. SILVER-GROUND CARPET, 21 June.
Naenia typica Linn. THE GOTHIC, 26 July, 5 August.
Hepialus fusconebulosa D&G. MAP-WINGED SWIFT, 1 July from Tillmouth.
Eulithis pyraliata D&S. BARRED STRAW, 10 July, West End, H. F. Church.
Lacanobia oleracea Linn. BRIGHT-LINE BROWN-EYE, 26 July.
Ourapteryx sambucaria Linn. SWALLOWTAIL, 24 July.
Peribatodes rhomboidaria D&S. WILLOW BEAUTY, 24 and 25 July, melanic.
Xestia c-nigrum Linn. SETACEOUS HEBREW CHARACTER, 24 July.
Cryphia domestica Hufn. MARBLED BEAUTY (2), 30 July.
Arctia caja Linn. GARDEN TIGER, 1 August.
Mesapamea secalis Linn. COMMON RUSTIC, 7 August.
Apamea monoglypha Hufn. DARK ARCHES, 14 August.
Aglais urticae Linn. SMALL TORTOISESHELL, 27 August.
Xestia xanthographa D&S. SQUARE SPOT RUSTIC, 30, 31 August.
Omphaloscelis lunosa Haw. LUNAR UNDERWING, 4 September.
Allophyas oxyacanthae Linn. GREEN-BRINDLED CRESCENT, 2 September.

Five-spot Burnet in Selkirkshire

A. Buckham

On 26th August 1993 when a friend and I were passing through an area of rough ground covered with large patches of knapweed, I observed a few Burnet moths flying. My first thought was — Six-spot? until one landed nearby and on examination turned out to be a Five-spot.

Although they were very worn, I collected one of the best to set. This specimen was shown at the Edinburgh Entomological Club meeting and was detected as *Zygaena lonicerae* Schev. ssp. *latomarginata* Tutt. NARROW-BORDERED FIVE-SPOT BURNET. On returning to the site on the following day no moths were observed, but several empty pupa cases were found attached to stems of vegetation. This is the first recording of this species for Selkirkshire, although one has been recorded from near Newcastleton in Roxburghshire.

At this stage I feel it is prudent not to disclose the actual site until the size and strength of the colony has been estimated.

Thanks are due to Dr K. P. Bland for confirming the identity of this insect.

Birds at St Abbs Head in 1993

K. J. Rideout

The following is a list of the birds seen on or from the Nature Reserve in 1993 with a summary of their occurrence. An asterisk indicates breeding species.

- RED THROATED DIVER — small numbers in Jan., Aug., Sep., Oct.
 BLACK THROATED DIVER — 6 on 20th Oct.
 GREAT NORTHERN DIVER — a few singles in May, Aug., Oct.
 LITTLE GREBE — up to 3 sporadically April-May and Aug.-Oct., but no breeding.
 GREAT CRESTED GREBE — 3 in Oct.
 RED NECKED GREBE — 1 in Sep. and 2 in Oct.
 *FULMAR — 346 nests. Present all months.
 SOOTY SHEARWATER — 37 recorded between 21st Aug. and 7th Oct., then an excellent 132 in 4 hours on 12th October.
 MANX SHEARWATER — only 36 recorded between 22nd July and 6th Sep.
 MEDITERRANEAN SHEARWATER — 1 on 21st Aug.
 GANNET — seen all months, peak in summer, e.g. 2720 in 1 hour on 28th July.
 CORMORANT — small number most months.
 *SHAG — 300 nests, present all months.
 GREY HERON — 1-2 most months.
 MUTE SWAN — occasional pair on Mire Loch Mar.-Oct. but no breeding.
 WHOOPER SWAN — 30 north on 27th Mar.
 PINK FOOTED GOOSE — a few small groups Jan.-Apr.
 GREYLAG GOOSE — occasional groups in April, Sep., Nov.
 BARNACLE GOOSE — 100 on 8th Mar., 20 on 25th Sep.
 BRENT GOOSE — 2 on 8th Sep.
 SHELDUCK — 2-4 occasionally in May, June, Aug.
 WIGEON — occasional birds on Mire Loch May-Sep., also seen offshore Aug.-Sep.
 GADWALL — 1 on 4th Aug.
 TEAL — occasional on Mire Loch May-Sep., offshore Aug.-Sep.
 *MALLARD — 2 pairs nested, seen most months.
 GARGANEY — a pair at Mire Loch on 4th May.
 SHOVELLER — 2 on 9th April, 1 on 10th Aug.
 POCHARD — occasional in July, Sep., Dec.
 TUFTED DUCK — present all months, maximum 19 on 29th April.
 SCAUP — 1 11th-14th June, 5 flew over on 26th July.
 EIDER — present all months, maximum 469 on 5th Dec.

LONG TAILED DUCK — 8 north on 24th Oct.

COMMON SCOTER — a total of 150 recorded between 22nd July and 30th Oct.

VELVET SCOTER — 3 north on 22nd Aug.

GOLDENEYE — on Mire Loch up to 5 Jan.-Apr. and up to 3 Oct.-Dec. though 18 took shelter there in NE gales on 13th Dec.

RED BREASTED MERGANSER — unusually, 1 was present on Mire Loch Jan.-Mar. and Dec. Seen at sea in small numbers Jan., Apr., Aug., Sep., Oct.

GOOSANDER — singles on 5th Jan and 1st Dec.

MARSH HARRIER — singles north on 22nd Apr. and 16th May.

GOSHAWK — 1 on 20th Sep.

SPARROWHAWK — regular sightings in all months.

OSPREY — 1 north on 15th May.

KESTREL — recorded most months.

MERLIN — 1 on 19th Apr., singles on 6 dates Aug.-Oct.

HOBBY — 1 on 13th Aug.

PEREGRINE — recorded most months.

GREY PARTRIDGE — 1-2 occasionally Apr.-Jul.

QUAIL — 1 on 23rd May.

PHEASANT — occasional around Mire Loch.

WATER RAIL — 1 on 12th Apr., 1-2 regularly Sep.-Nov.

*MOORHEN — 3 pairs nested, only 1-2 outside breeding season.

*COOT — 2 pairs nested, unusually scarce outside breeding season.

OYSTERCATCHER — a few seen most months.

RINGED PLOVER — singles in May, Jun., Aug.

GOLDEN PLOVER — 2 in Aug., 5 in Nov.

GREY PLOVER — 9 flew over on 18th Sep.

KNOT — 1 at Mire Loch on 16th Jul., 2 groups seen at sea in Aug.

SANDERLING — 1 flew over on 10th Aug.

PURPLE SANDPIPER — 1-2 in Jan., Aug., Sep.

DUNLIN — small groups seen in Jan., Apr., Aug.

RUFF — singles seen flying past on two dates in Aug.

SNIFE — occasional birds Jul.-Nov.

WOODCOCK — 1-2 on several dates in Jan., Oct., Nov.

BLACK TAILED GODWIT — 7 flew over on 21st Aug.

BAR TAILED GODWIT — 11 flew over on 21st Aug. (same day as Black Tailed).

WHIMBREL — 2 in May, 25 between 16th Jul. and 8th Sep.

CURLEW — regularly seen during year, especially numerous in Aug.

REDSHANK — present most months with a peak of 12 on 13th Dec.

GREENSHANK — singles on three dates in Aug./Sep.

GREEN SANDPIPER — 1 on 28th Jul., 3 on 6th Aug., 1 on 3rd Sep.

COMMON SANDPIPER — 3 on 20th Apr., singles in May, Jul.

TURNSTONE — recorded in Jan. and Aug.

POMARINE SKUA — 23 between 22nd Jul. and 12th Oct.

ARCTIC SKUA — 88 between 9th Jul. and 24th Oct.

LONG TAILED SKUA — 1 south on 24th Aug.

GREAT SKUA — 79 between 22nd Jul. and 24th Oct.

LITTLE GULL — 9 flew past on 7th Oct.

SABINES GULL — singles on 11th Sep. and 12th Oct.

BLACK HEADED GULL — recorded most months, especially Feb. and Aug.

LESSER BLACK BACKED GULL — present in summer but no nests found.

*HERRING GULL — 380 nests. Present all months.

GREATER BLACK BACKED GULL — present all months, especially late summer.

*KITTIWAKE — 15,268 nests, but poor breeding success.

LESSER CRESTED TERN — 1 flew over Mire Loch on 16th May.

SANDWICH TERN — regular offshore 21st Apr.-Sep.

COMMON/ARCTIC TERN — regular offshore Jun.-Aug.

BLACK TERN — 1 south on 5th Aug.

*GUILLEMOT — 28,911 birds in Jun., sporadic visits to cliffs mid-Oct. to Dec.

*RAZORBILL — 1748 birds in Jun., scarce outside breeding season.

LITTLE AUK — 1 on 26th Sep., 8 on 7th Oct., 2 on 12th Oct.

*PUFFIN — present Mar.-Aug. with a peak count of 59 on 17th Jun.

*WOODPIGEON — 3 pairs nested.

COLLARED DOVE — occasional birds in Apr., Jun.

CUCKOO — singles on 17th May and 6th Jun.

BARN OWL — singles on 6th Jan. and 14th Apr.

LITTLE OWL — 1 on 5th Sep.

TAWNY OWL — 2 in Sep.

SWIFT — regularly seen 9th May-Aug.

KINGFISHER — singles on 18th Jul. and 19th Aug.

HOOPOE — 1 on 10th Nov.

WRYNECK — 1 from 11th-16th Sep. and another on 20th Sep.

GREEN WOODPECKER — 1 in May.

GREAT SPOTTED WOODPECKER — occasional birds in Jan., Jul., Sep, Oct.

WOODLARK — 1 from 4th-8th May.

*SKYLARK — seen most months, 1 breeding territory overlapped Reserve boundary.

SHORELARK — in Oct., 2 on 5th and 1 on 8th.

SAND MARTIN — occasionally seen 15th Apr.-Aug.

- *SWALLOW — 1 pair nested. Frequent sightings 2nd Apr.-18th Oct.
- HOUSE MARTIN — regularly seen 21st Apr.-Sep.
- TREE PIPIT — 1-4 on 13 dates between 22nd Apr. and 20th May, 1 on 4th Aug.
- *MEADOW PIPIT — 1 breeding territory. Seen all months, especially Apr. and Aug.
- *ROCK PIPIT — 11 breeding territories — present all year.
- YELLOW WAGTAIL — singles in Apr., May (including a 'blue headed') and Aug.
- GREY WAGTAIL — singles in Mar., Jun., Jul., Aug. with 5 on 12th Sep.
- *PIED WAGTAIL — 4 pairs nested. Seen most months, especially numerous in Apr.
- *WREN — 6 breeding territories, present all months.
- *DUNNOCK — 7 breeding territories, present all months.
- *ROBIN — 2 pairs nested. Present all months with up to 50 in mid-Oct.
- BLUETHROAT — seen daily from 10th-16th May with a peak of 5 on the 15th.
- BLACK REDSTART — 1-2 on 7 dates between 16th Apr. and 14th Jun.
- REDSTART — in May, 3-7 daily from 10th-17th, but 12 on 14th. In autumn, recorded daily 8th Sep.-9th Oct. with a peak of 23 on 15th Sep.
- WHINCHAT — frequently seen between 21st Apr. and 3rd Jun. and again between 26th Jul. and 20th Sep., with a peak count of 7 in mid-Sep.
- STONECHAT — occasional birds in Jan., Mar., May, Aug., Sep., Oct.
- *WHEATEAR — 2 pairs nested. Migrants daily from 21st Mar.-15th May and 4th Aug.-8th Oct. The peak count was 23 on 22nd Apr.
- RING OUSEL — occasional birds in Apr., May, Oct.
- *BLACKBIRD — 5 breeding territories. Present all months.
- FIELDFARE — seen in Apr., Jun., Oct. but no large counts.
- *SONG THRUSH — 1 pair nested. Seen most months.
- REDWING — seen in Apr., Sep., Oct. The peak count was 500 on 9th Oct.
- MISTLE THRUSH — infrequent sightings of 1-4 birds in May, Jun., Jul.
- GRASSHOPPER WARBLER — 1 from 22nd-28th Apr., 1 on 23rd Aug.
- *SEDGE WARBLER — 6 breeding territories. Regularly seen 25th Apr.-20th Sep.

- REED WARBLER — 2 on 20th Sep., up to 5 daily 1st-11th Oct.
 ICTERINE WARBLER — singles on 24th May and 2nd Oct., 2 on 3rd Oct.
 MARMORAS' WARBLER — 1 from 23rd-27th May. First Scottish record.
 BARRED WARBLER — 1 from 7th-13th Sep. with 2 on the 12th.
 LESSER WHITETHROAT — daily 7th-27th May, maximum 12 on the 12th; 1-4 on ten dates between 17th Jul. and 13th Oct.
 *WHITETHROAT — 2 breeding territories. Almost daily in May with a peak of 12 on 16th, 1-3 on 10 dates between 3rd Aug. and 13th Oct.
 GARDEN WARBLER — 1 on 29th Apr., up to 4 11th-16th May; 1-3 on thirteen dates between 27th Jul. and 8th Oct.
 BLACKCAP — 1-5 on 10 dates 15th Apr.-13th May. Frequent records 3rd Aug.-7th Nov.
 YELLOW BROWED WARBLER — 1 on 10th Oct.
 WOOD WARBLER — up to 3 10th-15th May, 1-2 2nd-4th Aug.
 CHIFF CHAFF — frequent 27th Mar.-20th May, maximum 15 on 20th Apr., up to 4 20th Sep.-5th Nov.
 *WILLOW WARBLER — 2 breeding territories. Regularly seen 9th Apr.-11th Oct. with peaks of 30 on 21st Apr. and 4th Aug.
 GOLDCREST — present Mar./Apr. and Sep./Oct., maximum 50 on 4th Oct.
 *SPOTTED FLYCATCHER — 1 pair nested. Up to 6 10th-30th May; regularly seen from 10th Sep.-4th Oct., maximum 14 on 14th Sep.
 PIED FLYCATCHER — up to 10 10th-16th May; 1-5 on 11 dates 27th Aug.-30th Sep.
 LONG TAILED TIT — occasional parties in Jan., Jul., Aug., Sep., Oct.
 MARSH TIT — singles on 11th May and 28th Aug.
 WILLOW TIT — 1 on 28th Aug. (same day as a Marsh Tit!).
 COAL TIT — small numbers (less than 10) in Jul., Sep., Oct.
 *BLUE TIT — 2 pairs nested; up to 12 in Sep.
 *GREAT TIT — 1 pair nested.
 TREECREEPER — 1-2 on ten dates between 27th Jul. and 8th Oct.
 RED BACKED SHRIKE — 1 on 10th-11th May, 1 on 4th Jun.
 JAY — 1-2 birds on 4 dates in Oct.
 MAGPIE — 1-2 15th Apr.-1st May.
 *JACKDAW — nested on cliffs, present all months.
 ROOK — seen infrequently during year but numerous in late summer.
 *CARRION CROW — 6 pairs nested. Seen in all months.
 RAVEN — 1-2 birds seen most months.
 STARLING — present all year.

- *CHAFFINCH — 9 breeding territories; seen all months.
- BRAMBLING — 1-2 in Apr.; day counts of up to 15 in Oct. and 30 in Nov.
- *GREENFINCH — 1 pair nested. 19 on 22nd Jul.
- *GOLDFINCH — 1 pair nested. Occasional during year.
- SISKIN — small numbers seen most months with 70 on 20th Oct. and 50 on 7th Nov.
- *LINNET — 10 breeding territories. Peak counts were 140 on 22nd Jul., 150 on 4th Nov.
- TWITE — in Oct., 30 on 24th and 14 on 30th.
- REDPOLL — occasional in Apr., May, Jun., Jul., Aug., Oct.
- COMMON ROSEFINCH — 1 on 30th May.
- LONG TAILED ROSEFINCH — 1 on 10th May was probably an escaped cage bird.
- BULLFINCH — 1 on 15th Apr. was the only record.
- LAPLAND BUNTING — 1 on 30th Oct.
- SNOW BUNTING — 3 on 24th Oct.
- *YELLOWHAMMER — 8 breeding territories. Present all months.
- ORTOLAN BUNTING — 1 on 11th Sep.
- RUSTIC BUNTING — 1 11th-14th May.
- LITTLE BUNTING — in May, 1 on 10th-11th May (possibly 2 on the 11th) and another on 15th.
- *REED BUNTING — 2 pairs nested. Seen most months with up to 9 in Sep.

A DANCING STOAT

D. C. Souter, Esq.

Detchant Park, Belford, Northumberland.

At 0815 on 8th August 1993 my wife and I saw a stoat on our lawn running at high speed all over it, rolling on its back, jumping in the air, distorting and writhing its body, scraping along on its side, disappearing under a thuja plicata hedge; out again, repeating these gyrations, running up an apple tree, down again, up again, continuing its running altering course many times at high speed and generally behaving as though crazed.¹ After five minutes it ran away out of sight.

NOTE

1. King, Carolyn (1989). *The Natural History of Weasels and Stoats*. Christopher Helm Publishers Ltd. Pp 79-81 and 197 suggests that sometimes stoats and weasels may "dance" to attract their prey though there need be no purposeful connection; but some instances of these gyrations may result from irritation of the brain caused by parasitic worms.

MISS RUTH LISTER, B.A.

AN APPRECIATION

Many people, particularly in Berwick and district, feel a great loss following the death of Ruth Lister on July 19th 1993.

Ruth was born in Berwick and educated at the Berwick High School for Girls, later known as Berwick Grammar School. She started working in Berwick Telephone Exchange and progressed to take up administrative posts in the Telephone Manager's office (British Telecom) in Newcastle. Although she lived in the Newcastle area during the years she worked there, she never lost her many friends and interests here. It was while she was working in Newcastle that she studied with the Open University in her spare time, and succeeded in gaining a B.A. degree.

As the time for retirement approached, Ruth bought a house in Berwick, and it was typical of her that she decided on an old house in Silver Street, where she could live surrounded by the atmosphere of the old town rather than on a new estate. During the eight years since returning to live in Berwick, Ruth was involved in many activities; she was an enthusiastic member of the local Ramblers' Association, secretary of the local WEA and did voluntary work in the Citizens' Advice Bureau. She was a founder member of the Friends of the Maltings and supported the Berwick Preservation Trust.

As well as being an active member of the Berwickshire Naturalists' Club, she served on the Council and was elected President for the current year. Ruth regarded this as a great honour and it was a matter of particular sadness to her that she had to resign the office.

Everything Ruth undertook was done with dedication and to the very best of her ability and many will miss her loyal and hard-working support.

M.P.

ARCHAEOLOGICAL NOTES — 1993

L. & D. Mackenzie Robertson
4 Hermitage Lane, Kelso.

The following short description of recent archaeological discoveries and work, by experts, on both sides of the Border is not presented as an academic account but as a guide by two Naturalists' Club members who have, for many years, been amateur archaeologists working with and under the guidance of qualified professionals. We hope it will be of interest to Club members and especially to those who, during our 16 years of Field Secretaryship of the Club, asked us often for more archaeological content in the field meetings. These notes are written not only for Club members who are archaeologically motivated, but also for those who like to know what "goes on" around them in the countryside.

THE BORDERS REGION

Peebles. Cuddyside.

A two-week excavation by Scottish Urban Archaeological Trust Ltd in February uncovered remains of two medieval buildings in advance of development of the area for sheltered housing.

Kelso. Spread Eagle Hotel.

Test holes dug in March at the rear of the building uncovered bones belonging to the Abbey cemetery. In March staff of S.U.A.T. Ltd uncovered a further skeleton which was that of a child and suggests that the townspeople used the cemetery as well as the nave of the Abbey Church.

Gordon. West Morriston.

Pieces of silver birch found in 1992 in digging a pond at West Morriston near Gordon were taken to the National Museum in Edinburgh for conservation. Three pieces had clear tooth marks of a beaver, an animal known to have become extinct in Scotland in the 12th century A.D. A fourth piece of wood had been cut with some form of edged tool.

Jedburgh. The Friary.

The landscaped remains of the medieval house of the Observant Franciscans have been incorporated into a public garden which

was opened in May by Father Ninian Arbuckle, the senior Franciscan Friar in Britain.

Hawick. Tower Hotel.

Remains of the ancient battlements were uncovered in restoration work and then cleaned and recorded by the Regional Archaeologist. There is an intention to restore the wall walk as part of the overall scheme to turn the Tower into an interpretation centre for Hawick's past.

Melrose. The Newstead Project.

The final season took place in August and September when several sites were surveyed and two were excavated. One was in the South annexe of the Roman fort where buildings on either side of a road were uncovered. The other was at Cairneymount near Earlston, a rectangular earthwork enclosure of Iron Age form which also produced medieval pottery.

Wells

Wells were discovered at several places in the Region — at Hume Castle, Kelso, Peebles and Galashiels.

The above notes are by courtesy of the archaeologist for the Borders Region Mr John Dent, at Borders Regional Headquarters, St Boswells, Melrose TD6 0SA. Mr Dent has recently formed a Borders Archaeological Forum which meets biannually and which, as a centre for information and discussion, has been very successful. He will be pleased to hear from Club members who have made discoveries or who have information of archaeological or environmental interest to pass on. We also as "middleman" would be pleased to hear anything of such interest and would pass the information on to Mr Dent.

NORTH NORTHUMBERLAND

Otterburn. High Rochester.

The National Park Department is continuing its five-year programme of conservation and interpretation at High Rochester Roman Fort near Otterburn. This year a large area of land outside the west walls at the fort was examined using geophysical surveying. The results indicate that this area of land was an annexe to the fort and a variety of Roman and later structures have been identified. Some geophysical surveying was also carried out in the north-west angle where some ruined 19th century cottages are situated. It was found that barrack blocks occupied this area in Roman times and that the ruined cottages are aligned perfectly on top of them. It may even be possible

that the bottom courses of stone from the cottages are in fact the remains of Roman barracks. Conservation of the slumping Roman walls on the west side of the fort is continuing and a small area of excavation confirmed the existence of an annexe wall on the west side.

Bridges

An archaeological survey of all bridges scheduled as Ancient Monuments has just been completed. In North Northumberland these consist of Coldstream, Twizel, the Union Chain Bridge and Weetwood. The survey aims to assist the County Council in managing the bridges in a manner appropriate to their architectural and historic importance. Each bridge has been recorded using rectified photography and all documentary references to each bridge have been brought together to produce a history of the structure. An architectural historian has examined each bridge to identify different phases of construction and has tied this into the historical accounts where possible.

Bamburgh Friary

Archaeological work took place earlier this year on the site of Bamburgh Friary. Several trenches were excavated prior to and during development revealing the plan of the Friary. All the upstanding walls of the Friary, now incorporated into farm buildings, were examined using rectified photography. The Dominican Friars acquired land to build at Bamburgh prior to 1265 and in that year Henry III gave them a further seven acres of land for the enlargement of their property. In 1450 a Benedictine monk from Durham who had recently joined the Dominicans in Bamburgh asked to return to Durham when he found life in Bamburgh under the Dominican rule too severe. There was also a notorious incident when a friar killed a dog called "Jollife" and threw it into a local well, poisoning the water.

In 1539 the Friary was dissolved and converted into a farm called The Friars which is the name it still bears. The excavations were carried out by Peter Ryder who noted that the church and the monastic buildings were converted into a house after the Friary was dissolved. The new dwelling was, of course, built with defence in mind having drawbars on the new doorway. The monastic cloister may have been re-used as a courtyard for the dwelling.

Northumbrian Coastline.

An archaeological project along the Northumbrian coastline has also been taking place. This project has been examining sites

which are subject to erosion caused by the sea. Resulting from this project, work at St Ebba's Chapel near Beadnell is now under way. This chapel has long been associated with Princess Ebba who was the sister of King Oswald who resided in Bamburgh for part of his reign in the 7th century. However the architectural remains at the chapel appear to date to the 13th century, although it may be on the site of an earlier one. The chapel will be conserved and a small interpretation panel erected beside the site so that visitors can better appreciate its importance.

Excavation by Northumberland County Council on the recently sea-eroded site at Low Hauxley has exposed two cists or graves on the cemetery site: (1) skeleton with decorated urn; (2) complete skeleton with decorated urn. Both are Bronze Age.

Monument Protection.

The County Archaeology Service is currently conducting work on behalf of English Heritage as part of the Monuments Protection Programme. This is a national programme taking place throughout England which reviews the protection offered to archaeological sites through existing legislation. Work is currently focusing on the northern Cheviots where many excellent prehistoric earthworks survive. Each site is visited and if it meets the criteria for protection, a recommendation is forwarded to English Heritage to include it on the schedule of sites. Once such sites are included on the schedule they are protected against developments such as tree planting and a variety of other activities which could be considered damaging to archaeology. This project will increase the number of sites which are afforded this protection and offers an opportunity to visit archaeological sites which have perhaps not been visited for many decades. The majority of sites in the Cheviots which are being reviewed consist of Roman period native settlements and small hill forts. Some particularly interesting examples are those Roman period native sites which clearly overlie cultivation terraces which were once thought to be medieval. However it is clear that many of these sites are in fact prehistoric in date giving a remarkable insight into early agriculture in the Cheviots.

Newsletter

Every April the County Archaeology Service publishes a newsletter summarising the activities and archaeological events in Northumberland. This newsletter is available free of charge to members from The County Archaeologist, Planning and Environment Division, Northumberland County Council, County Hall, Morpeth NE26 2EF (tel. 0670 534057).

The above notes are by courtesy of Miss Caroline Hardie, Northumberland County Archaeologist, County Hall, Morpeth, who, like Mr John Dent of the Borders Region, would be glad to hear from Club members who have news of discoveries, not only in the archaeological, but also in the environmental, field.

We repeat, we hope the above will be of interest to all members of the Berwickshire Naturalists' Club — a club, as its motto declares, that interests itself in many subjects.

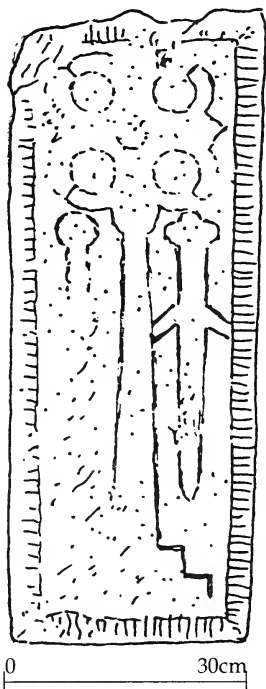
MEDIEVAL CROSS SLAB GRAVE COVER AT ANCROFT, NORTHUMBERLAND

Within a chamfered edge there is an incised design of a cross with a simple cross head consisting of four 'bracelets' or broken circles, with pointed buds. The shaft tapers upwards from a two-stepped calvary base. On the right of the cross shaft is a short sword or dagger (more likely the latter) with a trefoiled end to its pommel; on the left of the cross is a badly worn emblem which *may* be a key.

The cross form is a very common one over the whole North of England; the fact that the 'bracelets' have simple breaks rather than round-leaf terminals suggests a date in the later 12th rather than the 13th century. The form of dagger looks more Scottish than English; if the second emblem is a key (quite a common female emblem in Northumberland) then this would suggest a husband and wife buried under one slab, which is rather unusual. This second emblem is, however, badly worn, and might possibly be the pommel of a second dagger or sword, although this again would be unusual.

Mr Youngman of the Old School informs me that the slab was brought to Ancroft in the early 1980s when some repairs were being carried out to the church by stonemasons who had brought material from County Durham, and was given to him when he commented upon its design — otherwise it would have been cut up to make walling stones. It was drawn by me on 9/3/82, when lying in the churchyard, but is now in Mr Youngman's garden, alongside the churchyard.

PETER F. RYDER, December 1993



A slab of red sandstone, 0.83m long, and tapering from 0.32 to 0.30m wide.

FIELD SECRETARIES' REPORT — SEASON 1993

Field meetings were arranged by Miss R. Lister (President), together with Mrs S. Pate, Mr and Mrs B. H. Cato, Mr G. C. McCreath (President on death of Miss Lister), Mr J. L. McDougal and Dr G. A. C. Binnie, convenor. Mr G. B. Millican resigned at the end of 1992, and Mr and Mrs B. H. Cato at the end of 1993. Their contribution to an important aspect of the Club's life is gratefully acknowledged.

20th May, Thursday. HUTTON PARISH: PAXTON HOUSE, HUTTON CASTLE AND HUTTON CHURCH.

The Club was welcomed to Paxton House by Mr Ken Scotland, Executive Director of the Trust which has restored Paxton House and opened it to the public. This year it also became an out-station of the National Galleries of Scotland. Guides showed the members around the house in four groups and individuals explored the grounds. Many picnicked in the grounds, but others picnicked near Bluestone Ford, which crosses the Whiteadder to the west of Hutton.

Hutton Castle (also known as Hutton Hall) was visited by kind permission of Mr Anthony Gray, who is restoring the building. Mr James Fleming, recently retired farmer at Winfield, pointed out the external features of the castle, and told us about its history, and especially about its most famous inhabitant, Sir William Burrell.

Hutton Church was visited by permission of the minister, the Rev. Geraldine Hope, and of the Church Session. Mr James Fleming, who is also an elder of the church, pointed out the interesting historical and architectural features. In addition the church silver was displayed. Hutton churchyard has a number of interesting tombstones. Mrs Betty Wilsher, our expected speaker, was unable to attend because of illness. Her lecture notes were read in the church by Club member Mrs Betty Ashby, and then members inspected the oldest gravestones, largely grouped around the top of the steps from the church into the churchyard.

Tea was provided by ladies of the Church Guild in the Village Hall. This meeting was arranged by Miss Ruth Lister. It was announced at the meeting that she had resigned because of ill health.

G.A.C.B.

16th June, Wednesday. KALE WATER, LINTON CHURCH AND PENNYMUIR ROMAN CAMP.

Some 120 members of the Club met at Linton Church and were addressed by Mr Sandy Mackie, Session Clerk over a very long period. This was a special occasion for Mr Mackie as it was his first Club meeting as a member.

He told us some wonderful tales of Linton Parish and Church from its founding in about 1127, of its rebuilding in 1616, of some of its Ministers — the Leishmans, father and son covering 90 years from 1842, the son being Club President in 1912.

He told us of the leading families, amongst them the Somervails, one of whose early members slew a 'Linton beast', probably a bear, in the 11th century and whose family tower was destroyed in the Rough Wooing of the 1540s.

Another famous name was Elliot of Clifton Park who, along with Dawson of Frogden, was in the forefront of Scottish agricultural improvement in the 18th century.

A small community, as he described it, but it has had a long and full history.

Mr Pat Playfair-Hannay, Chairman of the Association for the Protection of Rural Scotland, then addressed the Club briefly on the work of the Association and outlined its aims of controlling development to reasonable levels rather than stopping any progress or change.

The Club moved up the Kale Valley through Hownam to Towford where we had lunch at the ford over the Kale near Towford Outdoor Education Centre.

After lunch we walked over the site of Pennymuir Roman Camp. Mrs Doreen Grove, Inspector of Ancient Monuments with Historic Scotland addressed us as she led us over the extensive site, showing us the shape of the ditch and wall defences. These marching camps were some 12 to 16 miles apart, and she described how they functioned and were constructed. There are four camps all adjacent which could hold up to 20,000 men, passing on their way between Trimontium and the Tyne at Corbridge.

After a very instructive day tea was taken at Floors Castle Tea Rooms.

L. McD.

15th July, Thursday. TANTALLON CASTLE AND MYRETON MUSEUM OF FLIGHT.

Tantallon Castle, reputedly one of the most awesome sights in Scotland, was visited by the Club in the morning. Mrs Doreen

Grove of Historic Scotland conducted members around the castle giving a most entertaining and informative history of this vast ruin. The castle stands on a grim rocky promontory, its massive red curtain of stone sweeping across the grass from cliff to cliff, making an impregnable fortress. Built in the 14th century by Sir William Douglas (created first Earl of Douglas in 1358), it was one of the last great baronial courtyard-castles to be built. Of it was written 'It is of suche strength as I nede not to feare the malice of myne enymeys'.

In 1528 the castle walls underwent a twenty-day bombardment from James V's artillery. After the king took possession, the castle was repaired and strengthened to make it 'unwinabill . . . to any enemies'. However, Cromwell's shelling of the castle in 1651 caused great damage resulting in much ruination, and by the end of the century the castle was abandoned.

In the afternoon members visited the Myreton Museum of Flight and were welcomed by Mr Atkey, assistant curator, and his staff. In the theatre a film was shown tracing the history of flying machines from the first airships up to the jet aircraft of the present day. Members enjoyed browsing around the Exhibition Halls where many of the exhibits brought back memories of the last war to those over a certain age! On the runway several 'planes were on show, one of them being a Vulcan bomber, as brooding and evil looking on the ground as it appears in the sky. The Museum is very well laid out and has an excellent number of exhibits of interest to all ages. Tea was taken at the Museum Restaurant.

S.P.

18th August, Wednesday. EDLINGHAM CHURCH AND CASTLE, LEMMINGTON HALL.

This meeting took the Club to the lands of Gospatric. Gospatric (from whom the Border family of Swinton descends), created Earl of Northumberland in 1067 by William the Conqueror, had blood from two royal families flowing through his veins: his paternal grandfather was King Malcolm III of Scotland and his maternal great-grandfather King Ethelred II of England (Ethelred the Unready: 'unready' meaning 'unlearned' and not 'unprepared').

Gospatric was the feudal overlord of Edlingham, Lemmington and Learchild and the Club visited the first two.

In the morning the Club assembled in the 11th century church at Edlingham to hear a talk by Mr J. C. Smith, K.St.J., Dip.Arch.(Dunelm), F.R.I.B.A., formerly Consultant to English Heritage, a retired architect and treasurer of the church, on the

architecture of the church, the castle and the surviving viaduct from the Alnwick to Cornhill Railway dating from 1885. Mr Brian Cato, the Corresponding Secretary, added a forensic footnote on the Edlingham Vicarage burglary of 1879 and the miscarriage of justice which has contemporary parallels.

Members then visited the castle which recent excavations have shown to be a small but complex fortified manor or castle with moated enclosure. The earliest building, the hall house, was built by Sir William Felton in 1295-1300. Members were also able to walk up the road to view the outside of the Vicarage. The traditional picnic lunch was taken beside the church by kind permission of Mr Robert Lee of Lumbylaw.

In the afternoon the Club visited Lemmington Hall by kind permission of Catholic Care who use it as a nursing home. Mr Brian Cato explained the history of the hall. The original 15th century pele tower was incorporated into a mid-18th century manor house, designed by the architect William Newton and built by Alderman Fenwick of Newcastle upon Tyne whose town house in Newcastle, formerly the Liberal Club, has been restored and can be seen on the western side of Pilgrim Street just north of the Swan House roundabout. Lemmington Hall fell into decay and became a roofless ruin until restored by Sir Stephen Aitchison in 1913. Members also walked over the adjoining field to the column designed in 1786 by Sir John Soane, architect to the Bank of England whose home is now a museum in Lincoln's Inn Fields, London. It commemorates members of the Evelyn family, kinsmen of John Evelyn the diarist, and was moved here from Felbridge Park, Surrey in 1928.

Tea was served by the staff of the Hall in the pavilion in the gardens.

B.C. & B.C.

16th September, Thursday. KIELDER

This was quite an ambitious outing, a trip of some sixty miles, though not so ambitious as the previous visits in 1889, 1904 and 1953; in 1889 and 1904 the journeys were made by train and then by horse and trap.

The week before our visit the weather was terrible with strong winds, flooding and torrential rain. This caused considerable concern as we were due to have a sail on the water; Anthony Murray telephoned me to say that on the Tuesday before our visit there they had not been able to launch the boat because of the wind. However, all was well. In spite of a stormy morning on the 16th September, about ninety stalwart members of the Club

battled their way over through storms and winds by car and bus. We were rewarded with a good day and a most enjoyable one.

The party was split into two groups. The bus party went to Kielder Castle to visit the Forestry Group exhibition and the second party went to Tower Knowe where they boarded the *Osprey* for a cruise round Kielder Water.



During our visit we learnt much about the area, both from Anthony Murray's commentary on the cruise and from various pamphlets. The Kielder reservoir project began in 1974 and was completed in 1979. It was one of the biggest water resource schemes ever planned in Britain. The North East could have faced serious water shortages. Some of the water is transferred from Kielder to the River Tyne at Riding Mill, to the River Wear at Stanhope, and to the River Tees at Eggleston. The reservoir is 9.6 miles long, the surface area is approximately 2,700 acres, and it will store 42,000 million gallons of water. The dam is 3,750 feet long and has a maximum height of 170 feet.

Those of us who visited Kielder Castle Forestry Commission Visitors' Centre were well pleased with all the information we got there about the Kielder Forest. It is part of 250 square miles of the Border Forest Park. One thing that they did tell us was that the trees are being re-planted after the first felling but the trash from the first felling is not being incorporated back into the ground, but is being sold off as forest bark at garden centres. We wondered if the practice is sustainable. Time will tell.

Anthony Murray's cruise on the reservoir was excellent. Whilst

we cruised along a commentary was played to us describing everything we saw. The cruise took about an hour and those on the morning cruise saw a young osprey fishing quite close by. The luxurious M.V. *Osprey* was well-equipped with seats, a bar serving hot drinks, and other beverages, and was heated as well.

After a picnic lunch taken in the restaurant, into which we had been invited, the two parties changed over. Unfortunately the bus party had been over an hour late arriving at Kielder Forest. The bus driver had not been informed by his company and had had to be extracted from his bed! Exactly to the day on the 16th September 1953, forty years earlier, the bus was also late — the bus driver had taken a wrong turning! Organisers beware.

It is impossible to describe all we saw at Kielder. There are plenty of things to do and see for young and old. Many members will be going back with friends and children to enjoy some of the facilities which include trout fishing, sailing, canoeing, horse riding, cycling, scouting, bird watching, back packing or browsing round the exhibitions. Further information can be had from the Visitors' Centre (0434 240398) at Kielder.

We finished off the day at the restaurant where an excellent cup of tea was taken.

G. C. McC.

Extra Meetings

27th May, Thursday. GEOLOGICAL MEETING, SICCAR POINT.

About 25 members and friends met at Old Cambus quarry by permission of the owner, Mr Drysdale. The guest speaker was Professor Emeritus Donald MacIntyre, late of the Department of Geology, Pomona University, California, and one time lecturer in Geology at Edinburgh University. The group was glad of the shelter of a dry stone dyke on the headland above the cliffs at Siccar Point. This was carefully chosen by the speaker not for the shelter it provided, but to illustrate that the wall had been built with red sandstone and grey greywacke stones. James Hutton, a Berwickshire farmer of the late 18th century and a leading geologist of his time, had speculated that these two types of sedimentary rocks must have met at Siccar Point, and he then confirmed it by visiting it by boat. Down by the shore it could be clearly seen that greywacke had once been overlain by red sandstone which had been deposited like silt. Compression laterally after solidifying had followed, to produce folding and to form vertical strata which could be seen very clearly.

By the shore, house martins were to be seen nesting in the cave, and a Naturalist's foot nearly compressed a herring gull's egg at the spot where the sea level talk was being given.

This was a most excellent meeting with an erudite leader with enthusiasm for his subject which he was able to communicate to his audience.

G.A.C.B.

10th June, Thursday. YETHOLM LOCH.

About 25 members and friends met at Loch Tower Farm, by kind permission of Mr and Mrs Wauchope. The meeting was led by Mrs Walton, Club member and a member of Scottish Wildlife Trust. It was explained that Yetholm Loch varied little in size and depth. It was filled by surface water from the surrounding fields and had no outflow apart from evaporation, so it had an unusual ecosystem which was relatively stable.

The party walked up the east side of the loch and various plants were seen and identified. Less common plants noted were brown sedge, great tussock sedge, bladder sedge and cowbane. A pochard was seen in company with tufted ducks, and a probable sedge warbler was seen and heard.

G.A.C.B.

22nd October, Friday. LADYTHORNE HOUSE.

The Club visited Ladythorne in 1976, when it was in very poor condition. Mr Neville Parker took over as tenant in 1981 when it was virtually derelict, and spent four years in restoring it. He and his family run it as a bed and breakfast establishment. Club members had morning tea or coffee, and Mr Parker conducted two tours of the house.

What appears to be a stone-built house has been revealed in the north-east of the building; this could have been a pre-existing farmhouse incorporated in the mansion house when it was built in 1721. This stonework is similar to that of the old farm buildings behind the house. This probably means that the plaster work and remains of a fireplace on the outside of the front garden wall was from an old cottage associated with the farm steading.

The original sandstone fireplace with its well worn Wilkie coat of arms has been removed and only one or two pieces are to be seen in the flower border in the north-east corner of the garden, near to the shed on the site of the mansion house privy. The front garden had much overgrown ornamental box hedges in 1975, and these have been replaced by lawns and borders.

In the old kitchen, now the dining room, an old 9" square black beam has been uncovered across the top of the old fireplace which is morticed at one end suggesting that its source was a wreck on Goswick sands. Finally the ceiling of the staircase had collapsed by 1981, but the central mulberry survived the fall and has been put back, but the initials of Robert and Jane Wilkie and the year, 1721, have disappeared.

G.A.C.B.

LIBRARIAN'S REPORT — 1993

In 1993 the Club Library room in Berwick Borough Museum was partitioned off so that at last the Library is in its own room with tables and chairs, including armchairs, for the use of readers. The pamphlets have been catalogued, as has the whole of the contents of the Library. It is hoped that members will make use of the facilities. Life members should have received Library tickets and members paying by banker's order should receive one with the programme.

Library acquisitions included three gifts:

Dixon, David Dippie, n.d., Notebook No. 1 (manuscript), the gift of Mrs C. Badenoch of Dunfermline.

Hardy, F. G. (1992). *The Marine Algae of Berwickshire: a detailed checklist*, reprint of an article in *The Botanical Journal of Scotland*, gifted by the author.

The genealogical trees of various families traced by Miss Grace Elliot and presented by her brother, Mr W. R. Elliot.

New books purchased were:

Borders Family History Society (1993). *Roxburghshire Monumental Inscriptions — Kelso, Ednam and Roxburgh*.

Collier, C., and Stewart, L. A. (1986). *Wooler and Glendale*, Vols 1 and 2.

Jackson, M. J. (1992). *Castles of Northumbria*.

Kerr, Ian (1992). *Lindisfarne's Birds*.

Willsher, B. (1990). *Understanding Scottish Graveyards*.

Second-hand purchases were:

Cochrane, Peter (1970s). *Abbey St Bathans* (photocopy).

Douglas, Fred (1971). *Gold at Wolf's Craig*.

Shiells, K. A. G. (1964). *The Geological Structure of North-east Northumberland*.

LIBRARIAN'S FINANCIAL STATEMENT FOR THE YEAR ENDED 23rd OCTOBER, 1993

INCOME	£	EXPENDITURE	£
Opening balance	193.41	Postage	12.82
Sales of Histories	91.71	Books	133.05
		Miscellaneous	8.22
			154.09
		Closing Balance.....	131.03
	<u>£285.12</u>		<u>£285.12</u>

FINANCIAL STATEMENT FOR THE YEAR ENDED 30th SEPTEMBER, 1993 — PREMIUM ACCOUNT

TREASURER'S REPORT — 1993

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EXPENDITURE

Printing — including Postage	2,020.12
How & Blackhall.....	53.32
Illustration for the History.....	125.00
Library Insurance	35.00
Subscriptions paid.....	158.00
Overpaid Subscriptions refunded	10.30
Hire of Hall for 1992 A.G.M.	20.00
Memorial Ruth Lister.....	
<i>Expenses</i>	
Corresponding Secretary	12.00
Field Secretaries	141.53
Treasurer.....	45.70
	<u>£2,620.97</u>
Balance at 30/9/1993	<u>£4,603.07</u>
	<u>£7,224.04</u>
	<u>£2,657.89</u>

INCOME

Balance at 1/10/1992	£3,023.38
<i>Subscriptions</i>	
Annual & Libraries (including subs overpaid)	3,466.00
Entrance Fees and Badges/Ties.....	185.00
<i>Sundry Credits</i>	
Refund of Tax 1992/93.....	346.63
Donations.....	3.00
Interest	99.03
Visitors' Fees	101.00
	<u>£7,224.04</u>
Balance in Natural History Publication Fund	

21 October, 1993. I have examined the books of The Berwickshire Naturalists' Club and from the vouchers and information provided have found them to be correct and in order.

(Sgd) E. J. Kellie
Royal Bank of Scotland, Ayton.



ADVICE TO CONTRIBUTORS

The *History* of the Berwickshire Naturalists' Club has now run continuously for 162 years. It has recorded a huge amount of information about every aspect of life in the Borders: archaeology, genealogy, history, sociology, topography, and all branches of natural history. It is an invaluable repository for such primary information.

Many people with special knowledge of Border affairs and happenings may, perhaps, be inhibited from contributing to the *History* by being unfamiliar with how to put an article together. The following notes are designed to assist, reassure and encourage such people; but also to be a general guide to all contributors. The requirements are simple; but the more closely the notes are followed, the speedier will be publication, the easier the lot of the Editing Secretary; and the greater the likelihood that the Club will be able to attract Editing Secretaries in the future!

Manuscripts are best typed, double-spaced, and two copies sent; but even handwritten documents, if clearly legible, can be considered. References in the text to other publications are most simply done by author name(s) and date and then listed in alphabetical/chronological order at the end of the manuscript, giving the title of the document and, for papers in journals, the volume and page number, for books, the place of publication and the publisher. In this style:

Baxter, E. V., Rintoul, L. J. (1953). The birds of Scotland, Edinburgh: Oliver and Boyd.

Boyd, H., Ogilvie, M. (1969) Changes in the British wintering population of the pinkfooted goose from 1950-1975. *Wildfowl*, 20, 33-46.

Taylor, G. (1937) List of fungi observed in the neighbourhood of Cockburnspath. *History of the Berwickshire Naturalists' Club*, 29, 303-313.

Titles of periodicals should be written in full, as above, not abbreviated.

Sometimes text references to other publications, documents, etc., in the text are more conveniently done by superscript numbers, e.g.: "the house of Netherbyres"¹

and then related to a numbered entry in a list of references/notes at the end of the paper, as e.g.:

"5. Scottish Record Office TD 78/7."

When other publications have been consulted but are not specifically cited, it may still be useful to guide readers following up the subject, to give a "Bibliography", citing the publications in the same way as for references above.

Illustrations should be numbered consecutively and provided with short descriptive legends.

Contributions may be sent direct to the Editing Secretary, or handed to any Council Member.

Copyright. The copyright of papers published in the *History* will normally be understood to pass to the Berwickshire Naturalists' Club, as a permanently accessible institution, but authors may reserve copyright to themselves, if they so wish, by sending a request to the Editing Secretary.

HISTORY
OF THE
BERWICKSHIRE
NATURALISTS' CLUB

Additional copies available.

The Centenary Volume, published 1933, provides an index to the *History* from Volumes 1 to 27, (1831-1931)

Price £20.00

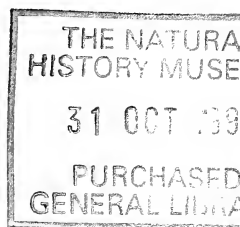
The Sesquicentenary Volume, published 1987, provides an index to the *History* from Volumes 28 to 41, (1932-1980)

Price £15.00

For purchase apply to:
The Librarian, Berwickshire Naturalists' Club,
Borough Museum, The Barracks,
Berwick upon Tweed TD15 1BT, U.K.

The Club Library is held in its own room in Berwick Borough Museum. Access for members is available at no cost on presentation of a Club Library ticket at the entrance to the Barracks. Tickets are available from the Librarian, and visits should be made by appointment with the museum curator, telephone 0289 330933.

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HISTORY

OF THE

BERWICKSHIRE

NATURALISTS' CLUB

INSTITUTED SEPTEMBER 22, 1831

"MARE ET TELLUS, ET, QUOD TEGIT OMNIA, CÆLUM"

VOL. 46.

PART 2, 1994

